

Connecting via Winsock to STN

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LOGONID SSSPE V636DXXS

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TRAINING ENTER 1, 2, 3, OR 02

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NEWS 1 Web Page URLs for STN Seminar Schedule - N. America

NEWS 2 Jan 25 BLAST(R) searching in REGISTRY available in STN on the Web

NEWS 3 Jan 29 ESTV has been reloaded and moves to weekly updates

NEWS 4 Feb 01 DKUT now produced by EIZ Karlsruhe and has a new update frequency

NEWS 5 Feb 19 Access via Tynet and SprintNet Eliminated Effective 3/11/02

NEWS 6 Mar 08 Gene Names now available in BIOSIS

NEWS 7 Mar 22 TOXNET no longer available

NEWS 8 Mar 22 REGISTRY BIO no longer available

NEWS 9 Mar 28 US Provisional Priorities searched with P in CACplus and CSEARCH

NEWS 10 Mar 28 TRENDSKIMC added for property searching in REGISTRY

NEWS 11 Apr 02 PAPERCHEM no longer available on STN Use PAPERCHEM2 instead

NEWS 12 Apr 08 "Ask CAS" for self-help around the clock

NEWS 13 Apr 09 BEHSTIN: Reload and Implementation of a New Subject Area

NEWS 14 Apr 09 ZDB will be removed from STN

NEWS 15 Apr 19 US Patent Applications available in REGDB, HELP, and REGDB

NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS

NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER

NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available

NEWS/NEWS February 1 CTRR/NT WINDOWS VERSION IS V6.0c.

CTR/NT MACINTOSH VERSION IS V6.0a(NG) AND V6.01(HP)

AND CTRR/NT DISCOVER EDITION V6.05 FEBRUARY 2002

NEWS/NOTES STN Operating Hours Plus Help Desk Availability

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FILE "TIOXIP" ENTERED AT 08:23:16 ON 15 MAY 2002

file register

COST IN U.S. DOLLARS

FILE ESTIMATED COST

ENTRY SESSION

0.21 0.21

FILE "REGISTRY" ENTERED AT 08:23:28 ON 15 MAY 2002

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STRICTLY FILE UPDATES: 13 MAY 2002 HIGHEST RN 415678-09-0

DICTIONARY FILE UPDATES: 13 MAY 2002 HIGHEST RN 415678-09-0

TSCA INFORMATION NOW CURRENT THRU July 7, 2001

Please note that search-term pricing does apply when conducting SMARTSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STN Note 27, Searching Properties in the CAS Registry File for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

FILE "ELK" CN 25

E1 1 ELK RECEPTOR TYROSINE KINASE CN

E2 1 ELK RECEPTOR TYROSINE KINASE LIGAND (HUMAN CLONE, HETK-1)

GLN:ELK-3 PRECURSOR CN

E3 0 - ELK-1 CN

E4 1 ELK RECEPTOR TYROSINE KINASE CN

E5 1 ELKADIC CN

E6 1 ELKALOY A CN

E7 1 ELKAMICIN A CN

E8 1 ELKAN A120 CN

E9 1 ELKAN B103 CN

E10 1 ELKAN G102-10 CN

E11 1 ELKAN G102-6 CN

E12 1 ELKANA A211-3 CN

E13 1 ELKAPIN CN

E14 1 ELKEFAM CN

E15 1 ELKEM209 CN

E16 1 ELKEM940 CN

E17 1 ELKEN SAND CN

E18 1 ELKENAMKROSHK A CN

E19 1 ELKINET CN

E20 1 ELKON FAST YELLOW GR CN

121 1 ELKONITE CN  
 122 1 ELKONITE 10W3 CN  
 123 1 ELKONITE 1W3 CN  
 124 1 ELKONITE 208 CN  
 125 1 ELKONITE 2125C CN

# 1 "ELK-1" CN 25

11 1 ELK RECEPTOR TYROSINE KINASE CN  
 12 1 ELK RECEPTOR TYROSINE KINASE LIGAND (ELK MAN C) ONE ELK-1  
 60N1 ELK-1 RECEPTOR CN  
 13 0 -- ELK-1 CN  
 14 1 ELK-1 RECEPTOR TYROSINE KINASE CN  
 15 1 ELKADIR CN  
 16 1 ELKMOYACN  
 17 1 ELKAMCINACN  
 18 1 ELKANVA120 CN  
 19 1 ELKANB103 CN  
 110 1 ELKAN G102-10 CN  
 111 1 ELKAN G102-6 CN  
 112 1 ELKANVA211A CN  
 113 1 ELKAPIN CN  
 114 1 ELKEEMCN  
 115 1 ELKEM209 CN  
 116 1 ELKEM940 CN  
 117 1 ELKEM SAND CN  
 118 1 ELKEM-MIKROSHKACN  
 119 1 ELKINET CN  
 120 1 ELKON EAST YELLOW GR CN  
 121 1 ELKONITE CN  
 122 1 ELKONITE 10W4 CN  
 123 1 ELKONITE 1W3 CN  
 124 1 ELKONITE 208 CN  
 125 1 ELKONITE 2125C CN

## 514

1 1 "ELK-1 RECEPTOR TYROSINE KINASE" CN

## DIS111 SQIDE

11H ESTIMATED COST FOR THIS REQUEST IS 5.54 U.S. DOLLARS  
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y) N/A

11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
 RN 149434200-9 PJ GENTRY  
 CN Kinase (phosphorylating), gene elk protein (9CI) (CAINDEX NAME)  
 01H1 RN NAME  
 CN 11b Kinase  
 CN 11b receptor tyrosine kinase  
 CN **Elk-1 receptor tyrosine kinase**  
 CN EphA2 receptor tyrosine kinase  
 CN Gene elk protein kinase  
 CN Gene elk receptor protein tyrosine kinase  
 CN Gene elk receptor tyrosine kinase  
 CN Gene elk tyrosine kinase  
 ME Unspecified

CT MAN  
 SR CA  
 IC STN Hls: CA, CAPLUS, TOXICENTER, USPAPTEL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

47 REFERENCES IN FILE CA (1967 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 47 REFERENCES IN FILE CAPLUS (1967 TO DATE)

log <sub>10</sub>	COST IN U.S. DOLLARS	ENTRY	SINCE FILE	TOTAL
			SESSION	
FILE LAST UPDATED COST			7.10	7.31
STN INTERN. VISIONAL LOGOFILE AT 08:26:00 ON 15 MAY 2002				

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LOGINID:SSSPT-M1636DXS

PASSWD:RD

TERMINAL CENTER 1, 2, 3, OR ?)2

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NEWS 1 Web Page: URLs for STN Seminar Schedule - N. America  
 NEWS 2 Jun 25 BLAST(R) searching in REGISTRY available in STN on the Web  
 NEWS 3 Jun 29 EST: A has been reloaded and moves to weekly updates  
 NEWS 4 Feb 01 DRILLIT now produced by ITZ Karlsruhe and has a new update  
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 NEWS 5 Feb 19 Access via Jymnet and SprintNet Eliminated Effect vs 3.41.02  
 NEWS 6 Mar 08 Gene Names now available in BIOSIS  
 NEWS 7 Mar 22 TOXNET no longer available  
 NEWS 8 Mar 22 THERMAMO no longer available  
 NEWS 9 Mar 28 US Provisional Priorities searched with P in C.A.C. plus  
 and USPATEL  
 NEWS 10 Mar 28 JAPANSKI C.M.C added for property searching in REGISTRY  
 NEWS 11 Apr 02 P-APRCHPM no longer available on STN. Use P-APRCHPM2 instead  
 NEWS 12 Apr 08 "Ask C.A.S." for self-help around the clock  
 NEWS 13 Apr 09 BELLSTEIN, Reload and Implementation of a New Subject Area  
 NEWS 14 Apr 09 ZIDB will be removed from STN  
 NEWS 15 Apr 19 US Patent Applications available in HICIDB, HICPAT, and HICIDB  
 NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HICAPLUS, and ZCAPLUS  
 NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER  
 NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.04.  
 CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0a(DF).  
 AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002.  
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FILE THOMAS ENTERED AT 09:29:35 ON 15 MAY 2002

file number	COST IN U.S. DOLLARS	ENTRY	SINCE FILE	TOTAL
FILE ESTIMATED COST			0.21	0.21

FILE "BIOLOGY" ENTERED AT 09:29:35 ON 15 MAY 2002  
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 PLEASE SEE "HELP" SCREENS FOR DETAILS.  
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SUBJECT FILE PDVITS 13 MAY 2002 HIGH SEVEN 41567840940  
 DICTIONARY FILE PDVITS 13 MAY 2002 HIGH SEVEN 41567840940

USCAV INFORMATION NOW CTRPNT THROUGHT July 7, 2001

Please note that search-term pricing does apply when conducting SMARTSEARCH searches

Cross-over limits have been increased. See HELP CROSSOVER for details

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNnote 27, Searching Properties in the CAS Registry File, for complete details.  
<http://www.cas.org/ONLINE/STN/STNnotes27.pdf>

chk-17.cn

FILE IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt ( )

chk-17.cn  
 FILE K-17 CN

chk-17.cn  
 FILE K-17 CN

chk-17.cn  
 FILE K-17 CN

MAPK "IS NOT A VALID FIELD CODE"  
 For a list of field codes for the current file, enter "HELP SPELDS"  
 at an arrow prompt ( )

MAPK CN  
 FILE MAPK CN

MAPK CN

MAPK CN

MAPK CN

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DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y/N)

15. ANSWER 1 OF 1: REGISTRY: COPYRIGHT 2002 ACS

RN 142805-58-1: RDCSTRY

CN Kinase (phosphorylating) mitogen-activated protein kinase (9C1) (CA

INDEN N AMF)

OTHER N AMF:

CN c-Raf-1 protein kinase kinase

CN ERK5

CN Intracellular signal-regulated kinase protein kinase

CN Gene lu27 protein kinase

CN Gene lu27 serine/threonine tyrosine kinase

CN Gene wsl1 MAPK kinase

CN Map kinase kinase

CN MAP kinase kinase

CN MAP kinase kinase 1

CN MAP kinase kinase Wsl1

CN MAP2K

CN **MAPK kinase**

CN MAPK-activated protein kinase 2

CN MAPK ERK kinase

CN MAPK

CN MAPK kinase

CN Mck

CN Mdk kinase

CN MEK protein kinase

CN MEK tyrosine kinase

CN MEK-1 kinase

CN MEK-1 protein kinase

CN Microtubule-affinity-regulating kinase

CN Mitogen-activated protein kinase kinase

CN Mitogen-activated protein kinase kinase Mck

CN Mitogen-activated protein kinase extracellular signal-regulated kinase

kinase 1

CN p45 MAP kinase kinase

CN Protein kinase MEK

CN Protein kinase MEK-1

CN Protein kinase p45mapk

CN Wsl1 kinase

CN Wsl1 MEK

DIR 146100-92-6

MF Unspecified

CI MAN

SR CA

IC STN Files: ADISNEWS, AGRICOL, A BIOSIS, BROTCINO, CAC, CAPI, IS, CTN,

LABASE, PROTE, TOXNET, TSP, VET, T

\*\*\* STRUCTURE DIAGRAMS NOT AVAILABLE

2729 REFERENCES IN FILE CAC(1967 TO DATE)

8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2746 REFERENCES IN FILE CAPTS (1967 TO DATE)

1 "GAL-4" CN 25

E1 1 GAL-BETA1,3-GAL-NAC--ALPHA2,3-SIALYLTRANSFERASE (PIG CLON

ST30) CN

E2 1 GAL-BETA1,3-GAL-NAC--ALPHA2,3-SIALYLTRANSFERASE (RAV CLON

ST3N-1) CN

E3 0 -- GAL-4 CN

E4 1 GAL-G4CHOH CN

E5 1 GAL,ALPHA1,3GAL,BETA1,4GALCNAC,BETA1,3GAL,BETA1,4GAL,BETA1-

CER CN

E6 1

GAL,ALPHA1,3GAL,BETA1,4GALCNAC,BETA1,3GAL,BETA1,4GALCNAC,BETA1,3GAL,BE

TAL,4GALBI-CER CN

E7 1 GAL,BETA1,3,4GALCNAC,ALPHA2,3-SIALYLTRANSFERASE (HUMAN

CLONE ST3NP-1) CN

E8 1 GAL,BETA1,3,4GALCNAC,ALPHA2,3-SIALYLTRANSFERASE (HUMAN

PLACENTA CLONE ST3NP-1) CN

E9 1 GAL,BETA1,3,4GALCNAC,ALPHA2,3-SIALYLTRANSFERASE (RAV CLON

ST3N-1) CN

E10 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (ALPHA2,3-

SIALYLTRANSFERASE (HUMAN CLONE HST30-1) CN

E11 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (HUMAN

CLONE HST30-1) CN

E12 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (HUMAN

REDUCED) CN

E13 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (MOI SI

BRAND) CN

E14 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (PIG CLON

LAMBDA ST1, LAMBDA ST2) CN

E15 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (RAV

BRAND) CN

E16 1 GAL,BETA1,3GAL-NAC-SPECIFIC GAL-NAC,ALPHA2,6-

SIALYLTRANSFERASE (CHICKEN TESTES CLONE PCDB351) CN

E17 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (MOI SI CLON

PH82-AS1) CN

E18 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (ALPHA2,3-

SIALYLTRANSFERASE (HUMAN CLONE ST3-1) CN

E19 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (ALPHA2,3-

SIALYLTRANSFERASE (HUMAN PLACENTA CLONE ST3-1) CN

E20 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (ALPHA2,3-

SIALYLTRANSFERASE (HUMAN PLACENTA CLONE ST3-2) CN

E21 1 GAL,BETA1,3GAL-NAC,ALPHA2,3-SIALYLTRANSFERASE (ALPHA2,3-

SIALYLTRANSFERASE (HUMAN PLACENTA CLONE ST3-4) CN

E22 1 GAL,BETA1,3GAL-NAC,ALPHA2,6-SIALYLTRANSFERASE (HUMAN GEN

ST6GALNAC) CN

E23 1 GAL,BETA1,3GAL-NAC,ALPHA2,6-SIALYLTRANSFERASE (HUMAN GEN

ST6GALNAC) CN

E24 1 GAL,BETA1,3GAL-NAC,ALPHA2,6-SIALYLTRANSFERASE (HUMAN GEN

ST6GALNAC) CN

E25 1 GAL,BETA1,4GAL,ALPHA1,3GAL,BETA1,4GAL,BETA1,4GAL,BETA1-

ICER CN

E26 1 ELK-1" CN 25

E1 1 ELK RECEPTOR TYROSINE KINASE CN

E2 1 ELK RECEPTOR TYROSINE KINASE (HUMAN CLONE H11.1)

E3 0 -- ELK-1 CN

14 1 H K-1 RECEPTOR TYROSINE KINASE CN  
 15 1 H KADTR CN  
 16 1 H K MOY ACN  
 17 1 H K MVGTA CN  
 18 1 H K N A 120 CN  
 19 1 H K N H 103 CN  
 110 1 H K N G 102-10 CN  
 111 1 H K N G 102-6 CN  
 112 1 H K N A A21-3 CN  
 113 1 H K APN CN  
 114 1 H K P E M CN  
 115 1 H K M 209 CN  
 116 1 H K M 940 CN  
 117 1 H K M S AND CN  
 118 1 H K M AMROSHAKA CN  
 119 1 H K N E T CN  
 120 1 H K N EAST VITLOW GR CN  
 121 1 H K N I T CN  
 122 1 H K N I T 10W3 CN  
 123 1 H K N I T 1W3 CN  
 124 1 H K N I T 208 CN  
 125 1 H K N I T 2125C CN

3 "HIS-1" CN 25

11 1 H IS REANSCRIPTION FACTOR THE-2E GUTMAN PROSTACT GL AND GENE  
 THE-2C CN  
 12 1 H IS GSC CN  
 13 0 -- H IS LTR CN  
 14 1 H IS RE-ATPD PROTDIN EL-E-1 (CHICKEN) CN  
 15 1 H IS M CN  
 16 1 H IS AN CN  
 17 1 H IS AN-HEMUTRE MYE CN  
 18 1 H IS B 6000 CN  
 19 1 H IS B 7000 CN  
 110 1 H IS D CN  
 111 1 H IS E 9078 CN  
 112 1 H IS E ACN  
 113 1 H IS K CN  
 114 2 H IS N CN  
 115 1 H IS T CN  
 116 1 H IS T CN  
 117 1 H IS ACN  
 118 1 H IS N CN  
 119 1 H IS RINGITE CN  
 120 1 H IS RINGITE C 366 M COH 602 (S04) 3 26 (120) CN  
 121 1 H IS R I CN  
 122 1 H IS R I TRINACETAL CN  
 123 1 H IS R I TRINITRATE CN  
 124 1 H IS T CN  
 125 1 H IS CN

4 "ICI" CN 25

11 1 ICI P CN  
 12 1 ICI TETRACETIC OROBORATE CN

E3 0 -- ICE CN  
 E4 1 ICE 050 CN  
 E5 1 ICE 408 CN  
 E6 1 ICE 703 CN  
 E7 2 ICE CN  
 E8 1 ICE (METAL) CN  
 E9 1 ICE (NITRATE) CN  
 E10 1 ICE I CN  
 E11 1 ICE I (METAL) CN  
 E12 1 ICE 1156 CN  
 E13 1 ICE 1837 CN  
 E14 1 ICE 3742 CN  
 E15 1 ICE 746 CN  
 E16 1 ICE 7R CN  
 E17 1 ICE CN  
 E18 1 ICE 100 CN  
 E19 1 ICE 68-1 CN  
 E20 1 ICE 68-2 CN  
 E21 1 ICE 2 CN  
 E22 1 ICE (ANGLISINE) CN  
 E23 1 ICE (LAVIN) CN  
 E24 1 ICE (VINE) CN  
 E25 1 ICE (H) CN

file name: caplus biosis  
 COST IN U.S. DOLLARS

ENTRY SESSION  
 24 62 24 83

FILE: ESTIMATED COST

FILE: ADDED, ENTERED AT 09:34:05 ON 15 MAY 2002

FILE: CAPLUS ENTERED AT 09:34:05 ON 15 MAY 2002  
 THESE SUBJECT TO THE TERMS OF YOUR SIGNATURE AGREEMENT  
 PLEASE SEE "HELP" SCREENS FOR DETAILS  
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FILE: BIOSIS ENTERED AT 09:34:05 ON 15 MAY 2002  
 COPYRIGHT © (C) 2002 BIOLOGICAL ABSTRACTS INC (BI)

s 142805-58-1 m  
 "RN" IS NOT A VALID FIELD CODE  
 "RN" IS NOT A VALID FIELD CODE  
 16 2738 142805-58-1 RN

s 28420 MAP (W) KINASE  
 17 28420 MAP (W) KINASE

d bios

FILE: HOMIE ENTERED AT 09:29:23 ON 15 MAY 2002

FILE: REGISTRY ENTERED AT 09:29:35 ON 15 MAY 2002  
 11 0 S ELK-12 CN  
 12 0 S ETS-LINK CN

(FILED) 10:41 PM ENTRY AT 09:29:23 ON 15 MAY 2002

THE "REGISTRY" ENTERED AT 09:29:35 ON 15 MAY 2002

11	OS-2K1P-CN
12	OS-ETS-1KRP-CN
13	OS-1CP-CN
14	OS-MAPK-CN

1.5  
I "ALPR" CN 25  
I SH-4  
I "GAL-4" CN 25  
I "JAN-1" CN 25  
I "MIR-1" CN 25

1771-1801

FILE MEDLINE, CAPLIS, BIOSIS ENTERED AT 09:33:05 ON 15 MAY 2002

19 108 5-ETHYL-2(S)-TRANSCRIPTION  
110 1105 5-ETHYL-2(S)-TRANSCRIPTION

474

s-reporter  
 L12 8176 REPORTER  
 s-luciferase  
 L13 3210311CIPHERASE  
 s18(s) 11  
 L14 2618(s) L11  
 s19(s) 11

$$s_{19(s)} 11$$

```

S110(S)011
L116 11.110(S)1.11
      S114 and 1.5
L117 26.114 OR L115
      dup rem 17
PROCESSING COMPLETE
L118 11 DUP REM
      dup rem 1.11

```

148 ANSWER 1 OF 11 MEDLINE	DATE 04/11/2001
<p>11 Esurget receptor-mediated activation of the serum response element in MCF-7 cells through MAPK-dependent phosphorylation of Elk-1</p>	

Journal code: HIV; 2985121R. ISSN: 0021-9258

18. ANSWER 1 OF 1 MEDLINE DUPLICATE 1

MCF-7 cells through MAPK-dependent phosphorylation of Elk-1.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2004 Apr 13) 276, 15, 11590-8  
Journal code: JBC, 2985121R, ISSN: 0021-9258

- I18 ANSWER 2 OF 11 MEDLINE  
 T1 High glucose-enhanced mesangial cell extracellular signal-regulated protein kinase activation and alpha1(IV) collagen expression in response to endothelin-1: role of specific protein kinase C isozymes.  
 SO JAMA 275 (2001 Oct 50 (10)) 2376-83  
 Journal code: EBN: 0372763 ISSN: 0012-1797
- I18 ANSWER 3 OF 11 MEDLINE  
 T1 1-pyrenylsaccharide activation of the MEK-ERK1,2 pathway in human mesangial cells mediates tissue factor and tumor necrosis factor alpha expression by inducing Elk-1 phosphorylation and Egr-1 expression  
 SO BIOLOGY (2001 Sep 1) 98 (5) 1429-39  
 Journal code: AEG: 7603809 ISSN: 0006-4971
- I18 ANSWER 4 OF 11 MEDLINE  
 T1 The anthrax edema toxin and dermaphysin are potent inhibitors of the epidermal growth factor receptor  
 SO JOURNAL OF AGING (2001 Sep 1) 98 (5) 1429-39  
 Journal code: EBN: 0374755 ISSN: 0021-8561
- I18 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
 T1 1-pS activation of the MEK-ERK1,2 MAPK pathway in human monocyte cells induces Egr-1 gene expression: Role in the induction of inflammatory mediators  
 SO Blood (November 16, 2000) Vol 96, No 11 Part 1, pp 667a print Meeting Info: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000 American Society of Hematology  
 ISSN: 0006-4971
- I18 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS  
 T1 C-130beta and Etk-1 synergistically transactivate the c-fos serum response element  
 SO BMC Cell Biol (2000) 1: No pp given  
 CODEN: JCBMAY ISSN: 1471-2121  
 URL: <http://www.biomedcentral.com/content/pdf/1471-2121-1-2.pdf>
- I18 ANSWER 7 OF 11 MEDLINE  
 T1 Protein phosphatase 2A suppresses MAP kinase signalling and ectopic protein expression  
 SO CELLULAR SIGNALING (1999 Aug 11 (8)) 575-80  
 Journal code: AEB: 8904683 ISSN: 0898-6568
- I18 ANSWER 8 OF 11 MEDLINE  
 T1 p38 Mitogen-activated protein kinase mediates the transcriptional induction of the atrial natriuretic factor gene through a serum response element: A potential role for the transcription factor ATF6  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1998 Aug 7) 273 (32) 20636-43  
 Journal code: HVC: 2985218 ISSN: 0021-9258
- I18 ANSWER 9 OF 11 MEDLINE  
 T1 Growth factor-induced transcription via the serum response element is inhibited by cyclic adenosine 3',5'-monophosphate in MCF-7 breast cancer cells

- SO JOURNAL OF CELL PHYSIOLOGY (1997 Jun) 138 (6) 2219-26  
 Journal code: EGF: 0375040 ISSN: 0013-7227
- I18 ANSWER 10 OF 11 MEDLINE  
 T1 Functional role of extracellular signal-regulated protein kinases in gastric acid secretion.  
 SO AMERICAN JOURNAL OF PHYSIOLOGY (1997 Dec 273 (6 Pt 1)) G1263-72  
 Journal code: AER: 0370511 ISSN: 0002-9513
- I18 ANSWER 11 OF 11 MEDLINE  
 T1 Tissue-inducible Egr-1 transcription in renal inner medullary collecting duct (mDCT3) cells is mediated by extracellular signal-regulated kinase activation.  
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (1996 Oct 1) 93 (20) 11242-7  
 Journal code: PVS: 7505876 ISSN: 0027-8424
- d: 1996.5.4.3.1
- I18 ANSWER 9 OF 11 MEDLINE  
 T1 ACCESSION NUMBER: 97307662 MEDLINE  
 DOCUMENT NUMBER: 97307662 PubMed ID: 9165002  
 TITLE: Growth factor-induced transcription via the serum response element is inhibited by cyclic adenosine 3',5'-monophosphate in MCF-7 breast cancer cells  
 COMMENT: Comment in: Endocrinology 1997 Jun 138 (6): 2217-8  
 AUTHOR: Lowe WT, Jr, Fu R, Banko M  
 CORPORATE SOURCE: Department of Medicine, Veterans Administration Chicago Healthcare System and Northwestern University Medical School, Chicago, Illinois 60611, USA. [mlowe@northwestern.edu](mailto:mlowe@northwestern.edu)  
 SOURCE: ENDOCRINOLOGY (1997 Jun) 138 (6) 2219-26  
 Journal code: EGF: 0375040 ISSN: 0013-7227
- PTB: COUNTRY: United States  
 LANGUAGE: English  
 FILE STATUS: Abridged Index Medicus Journals, Priority Journals  
 ENTRY MONTH: 199706  
 ENTRY DATE: Entered STM: 19970630  
 Last Updated on STM: 20000303  
 Entered Medline: 19970617
- AB: The effect of increased intracellular cAMP on MCF-7 breast cancer cell growth was examined by treating cells with either forskolin, an activator of adenylyl cyclase, or 8-(4-chlorophenylthio)-cAMP (8-CPT-cAMP), a cAMP analog. Compared to cells maintained in control medium, treatment with either 1 or 10 microM forskolin decreased cell growth by 17% and 68%, respectively, whereas treatment with 250 microM 8-CPT-cAMP decreased cell growth by 29%. To determine whether this effect of cAMP on cell growth was mediated by inhibition of the activity of extracellular signal-regulated kinases 1 and 2 (ERK1 and -2), two mitogen-activated protein kinases, the effect of cAMP on growth factor-induced ERK activity in MCF-7 cells was examined. Treatment with either insulin-like growth factor I (IGF-I) or

epidermal growth factor (EGF) for 10 min stimulated a 4- to 8-fold increase in ERK1 and -2 activity. This effect of EGF-1 and EGF-2 was not inhibited by increased intracellular cAMP generated by pretreatment of the cells with 10 microM forskolin. Similarly, 10 microM forskolin had no effect on EGF-1- or EGF-2-induced ERK activity in cells treated with growth factor for 10 min. To determine whether cAMP inhibits other growth factor-mediated effects, its effect on the activity of the serum response element (SRE), a DNA promoter element whose activity is regulated by a variety of growth-promoting events, was examined. For these assays, MCF-7 cells were transiently transfected with pTK81-SRE-1-uc, a luciferase fusion gene that contains the SRE, cloned 5' to a minimal thymidine kinase promoter and the luciferase gene. Treatment with either EGF-1 or EGF-2 increased pTK81-SRE-1-uc activity in a dose-dependent fashion. Pretreatment of cells with 10 microM forskolin decreased EGF-1- and EGF-2-stimulated luciferase activity by approximately 75%. An intermediate effect was observed using 8-CT-cAMP; similar results were obtained. SRE activity is dependent upon the activation by phosphorylation of a ternary complex factor, included among the ternary complex factors is Elk-1.

1 When MCF-7 cells were cotransfected with a vector that expresses a **Gad4-Elk-1** fusion protein and EGF-1-K-1-uc, a plasmid that contains two **Gad4** DNA recognition sites cloned 5' to a thymidine kinase promoter and the luciferase gene, treatment with forskolin partially inhibited the activation of Elk-1 by EGF-1 and EGF-2. These data demonstrate that in MCF-7 breast cancer cells, cAMP has no effect on EGF-1- or EGF-2-induced ERK activity, but it inhibits growth factor-induced transcription. Taken together with the effects of cAMP on EGF-1- and EGF-2-induced Elk-1 activation, these data suggest that the effect of cAMP on SRE activity occurs distal to ERK activation, possibly via inhibition of an ERK-independent pathway. Finally, these data indicate that the effect of increased intracellular cAMP on breast cancer growth may be mediated through inhibition of specific growth factor-induced effects, including gene transcription.

118. ANSWER 7 OF 11. AB-DINE. DEPT. CL. ATE. 5.

ACCESSION NUMBER. 1999/609000. MEDLINE. DOCT. MED. N. T. M. B. R. 99/609000. PubMed ID. 10433518.

11111. Protein phosphatase 2A suppresses MAP kinase signaling and ectopic protein expression.

1111111111. Chung H, Brantigan DL. CORPORA. SOT. RCE. Center for Cell Signaling, University of Virginia, Charlottesville 22908, USA.

SOT. RCE. CELL. T. T. AR. SGEN. M. IN. G. (1999 Aug) 11 (8) 575-80. Journal code. VYB. 8904683. ISSN. 0898-4568.

PEB. CO. NTRY. ENGL. AND. United Kingdom. Journal. Article. (JOT. R. N. M. AR. TIC. L. E.)

1. ANGT. AGI. English.

1111111111. SGEN. M. IN. G. 1999/10. PRIORITY. Journals.

ENTRY. DATE. Entered SIN. 1999/10/26. Last updated on SIN. 1999/10/26.

1111111111. Entered Medline. 1999/10/26. AB. Signalling by MAP kinase was examined in COS-7 cells by transiently

expressing a transcription reporter system plus ectopic-tagged protein phosphatase-2A catalytic subunit [(H)A3-PP2A-c]. Transactivation of a luciferase gene by **Gad4-Elk-1** in serum-stimulated cells was reduced 20-fold by co-expression of wild-type (H)A3-PP2A-c. This reduction of MAP kinase signaling required specific type-2A phosphatase activity, because the effects were not mimicked by co-expression of either a mutated, inactive (H)A3-PP2A-c or wild-type PP1Cdelta. Expression of (H)A3-PP2A-c was severely restricted by its own activity because 3-fold more inactive (H)A3-PP2A-c was produced. In a different assay the kinase activity of (H)A3-PP2A-c was 4-fold lower when co-transfected with (H)A3-PP2A-c compared to controls. Unexpectedly, mRNA of the reporter constructs were nearly eliminated by even low level expression of (H)A3-PP2A-c in either COS7 or HEK293 cells. The results show that PP2A activity is strictly regulated and can be a limiting factor in ectopic expression of various proteins.

118. ANSWER 6 OF 11. CAPLIS. COPYRIGHT 2002. ACS.

ACCESSION NUMBER. 2001 792927. CAPLIS. TITLE. C-EBPbeta and Elk-1 synergistically transactivate the c-fos serum response element.

1111111111. Hanton, Mary; Bundy, Linda M.; Sealy, Linda. ACTHORS. S. SOT. RCE. Department of Molecular Physiology and Biophysics, Vanderbilt University School of Medicine, Nashville, TN, USA.

SOT. RCE. BMC Cell Biol. (2000). 1. No pp. given. CODE. N. J. CHEM. I. A. V. ISSN. 1471-2121. URL. http://www.biomedcentral.com/content/pdf/1471-2121-1-2.pdf.

PEB. CO. NTRY. English. Journal. (online computer file). DOCT. MED. N. T. M. B. R. 2001/792927. CAPLIS. L. ANGT. AGI.

1111111111. Back ground. The serum response element (SRE) in the c-fos promoter is a convergence point for several signaling pathways that regulate induction of the c-fos gene. Many transcription factors regulate the SRE, including serum response factor (SRF), ternary complex factor (TCF), and CCAAT enhancer binding protein-beta (C/EBP beta).

1111111111. Independently, the TCFs and C/EBP beta have been shown to interact with SRF and to respond to Ras-dependent signaling pathways that result in transactivation of the SRE. Due to these common observations, we addressed the possibility that C/EBP beta and Elk-1 could both be necessary for Ras-stimulated

transactivation of the SRE. Results: In this report, we demonstrate that Elk-1 and C/EBP beta functionally synergize in transactivation of both a **Gad4** reporter plasmid in concert with

**Gad4-SRE** and in transactivation of the SRE. Interestingly, this synergy is only observed upon activation of Ras-dependent signaling pathways. Furthermore, we show that Elk-1 and C/EBP beta could interact both in an

in vivo GST-pulldown assay and in an in vivo co-immunoprecipitation assay. The in vivo interaction between the two proteins is dependent on the presence of activated Ras. We have also shown that the C-terminal domain of C/EBP beta and the N-terminal domain of Elk-1 are necessary for the

proteins to interact. Conclusions: These data show that C/EBP beta and Elk-1 synergize in SRF-dependent transcription of both a **Gad4** reporter and the SRE. This suggests that SRF, TCF, and C/EBP beta are all

necessary for maximal induction of the c-fos SRE in response to mitogenic

transactivation of the SRE. Results: In this report, we demonstrate that

Elk-1 and C/EBP beta functionally synergize in transactivation of both a **Gad4** reporter plasmid in concert with

**Gad4-SRE** and in transactivation of the SRE. Interestingly, this synergy is only observed upon activation of Ras-dependent signaling pathways. Furthermore, we show that Elk-1 and C/EBP beta could interact both in an

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necessary for maximal induction of the c-fos SRE in response to mitogenic

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**Gad4-SRE** and in transactivation of the SRE. Interestingly, this synergy is only observed upon activation of Ras-dependent signaling pathways. Furthermore, we show that Elk-1 and C/EBP beta could interact both in an

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118 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER 2001422077 BIOSIS

DOI NUMBER PREFIX 200100422077

1111 1PS activation of the MEK-ERK1/2 MAPK pathway in human monocyte cells induces Egr-1 gene expression. Role in the induction of inflammatory mediators.

ATTOR(S) Gudla M (1), O'Connell M (1), Hollis A (1), McGovern P (1), Mackman N (1).

CORPORATE SOURCE (1) The Scripps Research Institute, San Diego, CA USA

SOURCE Blood (November 16, 2000) Vol. 96, No. 11 Part 1, pp 607a print

Meeting Info: 42nd Annual Meeting of the American Society of Hematology, San Francisco, California, USA December 01-05, 2000. American Society of Hematology

ISSN 0006-4971

DOI NUMBER TYPE Conference

1 ANG1 AG1 English

SCNARY 1 ANG1 AG1 English

AB 1PS induces human monocytes to express many proinflammatory mediators, including the cytokine TNF and the procoagulant molecule tissue factor (TF). We have shown that Egr-1 and NF-kappaB Rel transcription factors mediate 1PS induction of TNF and TF gene expression. In this study, we investigated the role of the MEK-ERK1/2 MAPK pathway in 1PS induction of TNF and TF gene expression in human monocyte cells. The MEK1 inhibitor PP28059 reduced 1PS induction of TNF and TF expression in a dose-dependent manner. PP28059 did not affect 1PS-induced nuclear translocation of NF-kappaB Rel proteins and minimally affected 1PS induction of Egr-1-dependent transcription. In contrast, PP28059 strongly inhibited 1PS induction of Egr-1 expression. 1PS induction of the Egr-1 promoter was mediated by a approx 300 bp region that contained three SRF sites (SRE3-5). One of these sites (SRE4) bound a 1PS-inducible complex that contained SRF and Elk-1. 1PS induced phosphorylation of Elk-1 and increased the functional activity of a GAL4

-Elk-1 chimera protein. Activation of Elk-1 was inhibited by PP28059. Our data indicate that 1PS activation of the MEK-ERK1/2 pathway and Egr-1 gene expression is required, together with activation of pre-existing NF-kappaB Rel complexes, for maximal induction of the TNF and TF genes in human monocyte cells.

118 ANSWER 4 OF 11 MEDLINE DEPICTIVE 4

ACCESSION NUMBER 2001285773 MEDLINE

DOI NUMBER PREFIX 200100285773

1111 The anthocyanidins cyanidin and delphinidin are potent inhibitors of the epidermal growth factor receptor.

ATTOR Meyer S, Krenn M, Weyand T, Gaspar R, von Angerer F, Marko D

CORPORATE SOURCE Department of Chemistry, Division of Food Chemistry and Environmental Toxicology, University of Kaiserslautern, Erwin-Schrodinger-Strasse 52, 67663 Kaiserslautern.

Germany

SOURCE JOURNAL OF AGRICULTURE AND FOOD CHEMISTRY (2001 Feb) 49 (2) 958-62

JOURNAL CODE HSN: 0374755 ISSN: 0021-8591

PUB CODE NTJY United States

1 ANG1 AG1 English

FILE SEGMENT Priority Journals

ENTRY MONTH 200105

ENTRY DATE Entered STN: 20010529

Last Updated on STN: 20010529

Entered Medline: 20010524

AB The aglycons of the most abundant anthocyanins in food, cyanidin (cy) and delphinidin (del), were found to inhibit the growth of human tumor cells in vitro in the micromolar range, whereas malvidin (mv), a typical anthocyanidin in grapes, was less active. The aglycons preferentially inhibited the growth of the human vulva carcinoma cell line A431, overexpressing the epidermal growth factor receptor (EGFR). The glycosides cyanidin-3-beta-D-galactoside (cy-3-gal, idacyn) and malvidin-3-beta-D-glucoside (mv-3-glc, osun) did not affect tumor cell growth up to 100 microM. The tyrosine kinase activity of the EGFR, isolated from A431 cells, was potently inhibited by cy and del. Mv and the glycosides cy-3-gal and mv-3-glc were inactive up to 100 microM. In intact cells the influence of anthocyanin treatment on downstream signaling cascades was investigated by measuring the phosphorylation of the transcription factor Elk-1. A431 cells were transiently transfected with a luciferase reporter gene construct whose expression is controlled by MAP kinase and tyrosine dependent phosphorylation of a GAL4-Elk-1 fusion protein. We found that cy and del inhibited the activation of the GAL4-Elk-1 fusion protein in the concentration range where growth inhibition was observed. Thus, the anthocyanidins cy and del are potent inhibitors of the EGFR, shutting off downstream signaling cascades. These effects might contribute substantially to the growth-inhibitory properties of these natural food constituents.

118 ANSWER 3 OF 11 MEDLINE DEPICTIVE 3

ACCESSION NUMBER 2001491800 MEDLINE

DOI NUMBER PREFIX 200100491800

1111 Lipopolysaccharide activation of the MEK-ERK1/2 pathway in human monocyte cells mediates tissue factor and tumor necrosis factor alpha expression by inducing Elk-1 phosphorylation and Egr-1 expression.

ATTOR Gudla M, O'Connell M, A, Pawlinski R, Hollis A, McGovern P, Yan S E, Stern D, Mackman N

CORPORATE SOURCE Department of Immunology, The Scripps Research Institute, La Jolla, CA 92037, USA

CONTRACT NUMBER HL48872 (NIH HL)

SOURCE BIOLOGY (2001 Sep 1) 98 (5) 1429-39

Journal code: A8G: 7603509 ISSN: 0006-4971

PUB CODE NTJY United States

1 ANG1 AG1 English

FILE SEGMENT Abridged Index Medicus Journals, Priority Journals

ENRKY MONTH 200110  
ENRKY DATE Entered STN 20010906  
Last Updated on STN 20011008

Entered Medline 20011004

AB: 1-prophosphatidylcholine (1-PS) induces human monocytes to express many proinflammatory mediators, including the procoagulant molecule tissue factor (TF) and the cytokine tumor necrosis factor alpha (TNF-alpha). The TNF and TNF-alpha genes are regulated by various transcription factors, including nuclear factor (NF)-kappaB Rel proteins and I-gamma-1. In this study, the role of the Myc-R-RK1-2 mitogen-activated protein kinase (MAPK) pathway in I-PS induction of TF and TNF-alpha gene expression in human monocyte cells was investigated. The MAPK kinase (MAPK) inhibitor PD98059 reduced I-PS induction of TF and TNF-alpha expression in a dose-dependent manner. PD98059 did not affect I-PS-induced nuclear translocation of NF-kappaB Rel proteins and minimally affected I-PS induction of kappaB-dependent transcription. In contrast, PD98059 and dominant-negative mutants of the Ras-R-RK1-2 MAPK (extracellular signal-regulated kinase) pathway strongly inhibited I-PS induction of I-gamma-1 expression. In kinetic experiments, I-PS induction of I-gamma-1 expression preceded induction of TF expression. In addition, mutation of the I-gamma-1 sites in the TF and TNF-alpha promoters reduced expression of these proinflammatory genes. It was demonstrated that I-PS induction of the I-gamma-1 promoter was mediated by 3 SRF sites, which bound an I-PS-inducible complex containing serum response factor and Elk-1. I-PS stimulation transiently induced phosphorylation of Elk-1 and increased the functional activity of a G-M-4-Elk-1-LA chimera protein via the Myc-R-RK1-2 pathway. The data indicate that I-PS induction of I-gamma-1 gene expression is required for maximal induction of the TNF-alpha and TF genes in human monocyte cells.

118 ANSWER TO: 11 MEDLINE DE PUBLICITE 1  
ACCESSION NUMBER 2001287501 MEDLINE  
DOI: 10.1006/j.mol.2001.287501  
111411 I-gamma-1 expression preceded induction of TF  
element in MCF-7 cells through MAPK-dependent  
phosphorylation of Elk-1

AUTHOR Duan R, Xie W, Banerjee R, G. S. S. S.  
CORPORATE SOURCE: Department of Veterinary Physiology and Pharmacology, Texas  
A&M University, College Station, Texas 77843-4466, USA  
CONTACT NAME: R. Duan  
E: 809253 (NIEHS)

SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Apr 13) 276 (15)  
11590-8  
Journal code: JBC, 2985121R, ISSN: 0021-9258

PEER REVIEWED: Yes  
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY

LANGUAGE: English  
FILE SOURCE: Priority Journals  
ENRKY MONTH: 200105  
ENRKY DATE: Entered STN 20010529  
Last Updated on STN 20010529

AB: 1-Theta-1-styryl (1-2) induces c-fos protooncogene expression in MCF-7  
human breast cancer cells, and deletion analysis of the c-fos promoter

showed that the serum response element (SRE) at -325 to -276 was  
1-2-responsive. The mechanism of ligand-activated estrogen receptor alpha  
(ERalpha)-dependent activation of gene expression through the SRE was  
determined by mutational analysis of the promoter, analysis of  
mitogen-activated protein kinase (MAPK) pathway activation by 1-2, and  
transformation growth factor alpha (TGF-alpha) as a positive control. In  
addition, ERalpha-negative MDAMB-231 breast cancer and Chinese hamster  
ovary cells were used as reference cell lines. The results showed that  
transcriptional activation of the SRE by 1-2 was due to ERalpha activation  
of the MAPK pathway and increased binding of the serum response factor and  
Elk-1 to the SRE. Subsequent studies with dominant  
negative Elk-1, wild type, and variant G-M-4-  
Elk-1 fusion proteins confirmed that phosphorylation of  
Elk-1 at serines 383 and 389 in the C-terminal region of  
Elk-1 is an important downstream target associated with  
activation of an SRE by 1-2. Both 1-2 (ERalpha-dependent) and growth factors  
(ERalpha-independent) activated the SRE in breast cancer cells via the  
Ras-MAPK pathway; however, in ER-negative CHO cells that do not express a  
receptor for TGF-alpha, only hormone-induced activation was observed in  
cells transfected with ERalpha.

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(JBC) HOMO: ENTERED AT 09 29 23 ON 15 MAY 2002

FILE: REF: ENTERED AT 09 29 35 ON 15 MAY 2002

1.1 0.5 ELK-1/2 CN  
1.2 0.5 ETS-LIKE/2 CN  
1.3 0.5 ICE CN  
1.4 0.5 MAPK CN  
1.5 E-MAPK CN 25  
1.6 E-GAL-4 CN 25  
1.7 E-ELK-1 CN 25  
1.8 E-ETS-LIKE CN 25  
1.9 E-ICE CN 25  
1.10 E-ICE CN 25  
1.11 E-ICE CN 25

FILE: MEDLINE: CAPTIONS: HOMO: ENTERED AT 09 34 05 ON 15 MAY 2002  
1.6 2738 S-142805-58-1 RN  
1.7 28420 S-MAPK(W)KINASE  
1.8 1273 S-ELK-1  
1.9 108 S-ETS-LIKE(S)TR-ANSCRIPTION  
1.10 1109 S-ICE(S)TR-ANSCRIPTION  
1.11 E-GAL-4  
1.12 E-GAL-4

1.11 6883 S-GAL-4 OR GAL-4  
1.12 81176 S-REPORTER  
1.13 32103 S-LICHERASE  
1.14 26818(S)11  
1.15 9819(S)11  
1.16 11811(S)11  
1.17 265114 OR 115  
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MT Unspecified  
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2 REFERENCE IN FILE CACAPLIS (1967 TO DATE)

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FILE "REGISTRY" ENTERED AT 09 29 35 ON 15 MAY 2002

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18 T L S L K L P C N 25  
19 T C F C N 25

FILE "MEDLINE CAPLIS BIOSIS" ENTERED AT 09 34 05 ON 15 MAY 2002

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- I 22. ANSWER 4 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
II Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells
- I 22. ANSWER 5 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
II Focal adhesion kinase, Rap1, and transcriptional induction of vascular endothelial growth factor
- I 22. ANSWER 6 OF 8 CAPLUS COPYRIGHT 2002 ACS  
II Vascular endothelial growth factor (VEGF) induces vascular endothelial growth factor (VEGF) in human glioblastoma cells via ERK1/2 MAPK signaling pathway. Mechanism of low pH-induced VEGF
- I 22. ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS  
II Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells
- I 22. ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS  
II Focal adhesion kinase, Rap1, and transcriptional induction of vascular endothelial growth factor
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I 25. ANSWER 1 OF 3 MEDLINE  
II Vascular endothelial growth factor (VEGF) induces vascular endothelial growth factor (VEGF) in human glioblastoma cells via ERK1/2 MAPK signaling pathway. Mechanism of low pH-induced VEGF
- I 25. ANSWER 2 OF 3 MEDLINE  
II Focal adhesion kinase, Rap1, and transcriptional induction of vascular endothelial growth factor
- I 25. ANSWER 3 OF 3 MEDLINE  
II Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells
- doi: 10.1016/j.jmb.2004.04.022

- EDITOR: Maura M. Kader P. F. Sato S.  
CORPORATE SOURCE: Laboratory of Ocular Therapeutics, National Eye Institute, National Institutes of Health, Bethesda, Maryland  
20892-1850, USA  
SOURCE: JOURNAL OF OCULAR PHARMACOLOGY AND THERAPEUTICS, (2004 Aug)  
16 (4): 383-91.  
Journal code: CBR, ISSN: 1080-7683  
PUB. COUNTRY: United States  
Journal: Article (JOURN. ARTICLES)  
LANGUAGE: English  
FHE SEGNMENT: Priority Journals  
ENTRY MONTH: 200012  
ENTRY DATE: Entered SIN: 20010322  
Last Updated on SIN: 20010322  
Entered Medline: 20001207  
AB: Since the galactose-fed dog is an animal model that develops the advanced stage of proliferative retinopathy, the effects of **vascular endothelial growth factor (VEGF)** on cell growth, receptor expression and the activation of mitogen-activated protein (MAP) kinase pathway of dog retinal capillary endothelial cells were investigated. Dog retinal endothelial cells were cultured at 37 degrees C under 5% carbon dioxide atmosphere in C-S-C medium supplemented with endothelial cell growth factor (ECGF). VEGF receptor expression was examined by RT-PCR, and activation of MAP kinase was examined with antibody against phospho-Erk-1 (Ser383). When growth factors were removed from the culture medium, cell survival of dog endothelial cells was significantly reduced. Addition of VEGF protected these cells from cell death induced by growth factor starvation. VEGF also enhanced tube formation in dog endothelial cells and increased the expression of two VEGF receptors, Flk-1 and KDR/Flk-1. Cells treated with VEGF also displayed the phosphorylation of the transcription factor, Elk-1. Addition of the tyrosine kinase inhibitor, genistein, eliminated VEGF-induced cell growth and Elk-1 phosphorylation. These data confirm that cell growth and tube formation of dog retinal capillary endothelial cells are stimulated by VEGF. VEGF also increases the expression of the receptors, KDR and Flk-1, and activates the p44/42 MAP kinase pathway.
- doi: 10.1016/j.jmb.2004.04.022
- I 25. ANSWER 2 OF 3 MEDLINE  
II Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells
- I 25. ANSWER 3 OF 3 MEDLINE  
II Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells
- doi: 10.1016/j.jmb.2004.04.022

SOI RCI JOURNAL OF THE NATIONAL CANCER INSTITUTE (2000 Jul 5) 92

(13) 1065-73

Journal code: J91 750/809 ISSN: 0027-8874

PUB COUNTRY United States

Journal Article (JOURN ARTICLES)

LANGUAG: English

FILE SECT: Priority Journals

ENTRY MONTH 200009

ENTRY DAY: Entered STN 20000922

Last Updated on STN 20000922

Entered MEDLINE 20000914

AB: B-CELL GROWTH. Signals from a cell's environment are sensed by receptors, which activate pathways that, in turn, transmit the signals to the nucleus, informing decisions on growth, angiogenesis, and other cell functions. Transcription of **vascular endothelial growth factor (VEGF)**, a potent angiogenic factor, can be induced by cell-cell contact. In the current work, we sought to determine if this induction is dependent on transformation of cells to a malignant phenotype and subsequently to determine which signaling molecules mediate activation of VEGF transcription.

MT: T100D5. Normal and transformed prostate epithelial cell lines were examined at various cell densities to simulate the effect of increased cell contact on expression of VEGF messenger RNA. Transformed cells were also cotransfected with a VEGF promoter-reporter construct and with constructs that express dominant negative or activated versions of signal transduction proteins hypothesized to be involved in the cell-cell contact process, and reporter activity was assessed at various cell densities. All P values are two-sided. RESULTS: Direct cell-cell contact, but not extracellular matrix components, resulted in transcriptional activation of a VEGF promoter-reporter construct in multipoint (P = 0.001) but not in nonmultipoint (P = 0.37) prostate cells.

This process was mediated via a mitogen-activated protein kinase (MAPK); it required the activity of focal adhesion kinase (FAK), Rap1, and Raf and was Ras independent. In addition, transcriptional activation of a Ras-sensitive Elk-1 chimeric reporter by cell-cell contact suggests that Rap1 is a key factor in regulating the specificity of convergent MAPK-signaling pathways arising from different upstream extracellular stimuli. CONCLUSIONS: Cell contact induction of VEGF transcription via FAK and Rap1 provides a novel Ras-independent, but transformation-dependent, mechanism for stimulus-specific regulation of tumor VEGF expression via MAPK.

FILE: T100D5 ENTERED AT 09:29:23 ON 15 MAY 2002

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1 1 0 S1 R11 CN  
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FILE: T100D5 CAPTUS BIOSIS ENTERED AT 09:34:05 ON 15 MAY 2002

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17 28420 S14280558-1 RN  
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19 108 S1S1R17 CN  
20 1109 S1S1R17 CN

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18 11 D1P1R17 (15 D1P1R17 REMOVED)

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121 295 S14280558-1 RN  
122 8 S14280558-1 RN  
123 0 S14280558-1 RN  
124 0 S14280558-1 RN

125 1 D1P1R17 (15 D1P1R17 REMOVED)

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11-3

128. ANSWER 1 OF 3 SCISE ARCH COPYRIGHT 2002 ISI (R)  
 11. Acetic extracellular pH induces vascular endothelial growth factor (VEGF) in human glioblastoma cells via I-IRK1.2-MAPK signaling pathway - Mechanism of low pH-induced VEGF

128. ANSWER 2 OF 3 SOCI ARCH COPY RIGHT 2002 ISI (R) DR P J C V E  
11. Local adhesion kinase, Rap1, and transcriptional induction of vascular  
endothelial growth factor

11 Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells

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1011 ESTIMATED COST	3.14	114.60
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133. ANSWER TO 50: MEDLINE  
Title: Induction of VEGF Gene Expression by Retinoic Acid through Sp1-Binding  
Sites in Endotheloma Y79 Cells.  
SO INVESTIGATIVE OPHTHALMOLOGY AND VISUAL SCIENCE. 2002 MAY; 43 (5): 674-74.

Journal code: 7703701. ISSN: 0146-0404.

051011P.

### 134. ANSWER 1 OF 50 MEDLINE

SO INVESTIGATIVE OPHTHALMOLOGY AND VISION SCIENCE (2002 May) 43 (5):1367-74

Journal code: 77037C1 ISSN: 0146-0404

I 33 ANSWER 2 OF 50 MEDLINE

II Acidic extracellular pH induces vascular endothelial growth factor (VEGF) in human glioblastoma cells via ERK1/2/MAPK signaling pathway: mechanism of low pH-induced VEGF

SO JOURNAL OF BIOLOGICAL CHEMISTRY (2002 Mar 29) 277 (13):1168-74

Journal code: 2985121R ISSN: 0021-9258

I 33 ANSWER 3 OF 50 MEDLINE

II Differential expression of adenosine receptors in human endothelial cells: role of A2B receptors in angiogenic factor regulation

SO CIRCULATION RESEARCH (2002 Mar 22) 90 (5):531-8

Journal code: 0047103 ISSN: 1524-4571

I 33 ANSWER 4 OF 50 MEDLINE

II CD40 activation induces p53-dependent vascular endothelial growth factor secretion in human multiple myeloma cells

SO BLOOD (2002 Feb 15) 99 (4):1419-27

Journal code: 7603509 ISSN: 0006-4971

I 33 ANSWER 5 OF 50 MEDLINE

II Generation of bidirectional hypoxia/HIF-responsive expression vectors to target gene expression to hypoxic cells

SO GENETICS (2001 Dec) 8(23):1801-7

Journal code: 9421525 ISSN: 0969-7128

I 33 ANSWER 6 OF 50 MEDLINE

II Expression of HIF-1alpha by human macrophages: implications for the use of macrophages in hypoxia-regulated cancer gene therapy

SO JOURNAL OF PATHOLOGY (2002 Feb) 196 (2):204-12

Journal code: 0264634 ISSN: 0022-3417

I 33 ANSWER 7 OF 50 MEDLINE

II Inducible expression of endothelial TNF domain protein-1 by hypoxia in human lung adenocarcinoma A549 cells: Role of Src family kinase-dependent pathway

SO AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY (2002 Jan) 26

(1):127-34

Journal code: 8917225 ISSN: 1044-1549

I 33 ANSWER 8 OF 50 MEDLINE

II Induction of interleukin-8 by Epstein-Barr virus latent membrane protein-1 and its correlation to angiogenesis in nasopharyngeal carcinoma

SO CLINICAL CANCER RESEARCH (2001 Jul) 7 (7):1946-51

Journal code: C2H19502500 ISSN: 1078-0432

I 33 ANSWER 9 OF 50 MEDLINE

II Regulation of vascular endothelial growth factor expression by acidosis in human cancer cells

SO ONCOGENE (2001 Jun 21) 20 (28):3751-6

Journal code: ONCO:8711562 ISSN: 0950-9232

I 33 ANSWER 10 OF 50 MEDLINE

II Hypoxia induces vascular endothelial growth factor gene transcription in human osteoblast-like cells through the hypoxia-inducible factor-2alpha

SO ENDOCRINOLOGY (2001 Feb) 142 (2):959-62

Journal code: EGGZ:0375040 ISSN: 0013-7227

I 33 ANSWER 11 OF 50 MEDLINE

II Dual mechanism of vascular endothelial growth factor upregulation by hypoxia in human hepatocellular carcinoma

SO GUT (2001 Jan) 48 (1):87-96

Journal code: EVT ISSN: 0017-5749

I 33 ANSWER 12 OF 50 MEDLINE

II Ligand of CD40 induces the expression of vascular endothelial growth factor by endothelial cells and monocytes and promotes angiogenesis in vivo

SO BLOOD (2000 Dec 1) 96 (12):3801-8

Journal code: A8G ISSN: 0006-4971

I 33 ANSWER 13 OF 50 MEDLINE

II Regulation of vascular endothelial growth factor (VEGF) gene transcription by estrogen receptors alpha and beta

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (2000 Sep 26) 97 (20):10972-7

Journal code: PV3 ISSN: 0027-8424

I 33 ANSWER 14 OF 50 MEDLINE

II Age-dependent defect in vascular endothelial growth factor expression is associated with reduced hypoxia-inducible factor-1 activity

SO JOURNAL OF BIOLOGICAL CHEMISTRY (2000 Sep 22) 275 (38):29643-7

Journal code: HUY ISSN: 0021-9258

I 33 ANSWER 15 OF 50 MEDLINE

II Epidermal growth factor receptor transcriptionally up-regulates vascular endothelial growth factor expression in human glioblastoma cells via a pathway involving phosphatidylinositol 3-kinase and distinct from that induced by hypoxia

SO CANCER RESEARCH (2000 Oct 15) 60 (20):5879-86

Journal code: CNE ISSN: 0008-5472

I 33 ANSWER 16 OF 50 MEDLINE

II Anti-inflammatory effects of triptolide in human bronchial epithelial cells

SO AMERICAN JOURNAL OF PHYSIOLOGY (2000 Oct) 279 (4):R1111-17

Journal code: DRKO ISSN: 1040-0605

I 33 ANSWER 17 OF 50 MEDLINE

II Oncogenes and tumor angiogenesis: the HIF-1alpha onc protein activates the vascular endothelial growth factor (VEGF) gene promoter in a p53

independent manner

SO ONCOGENE (2000 Sep 21) 19 (40):4611-20  
Journal code: ONC ISSN: 0950-9232

I 33 ANSWER 18 OF 50 MEDLINE

T1 Reactive oxygen species generated at mitochondrial complex III stabilize hypoxia-inducible factor-1 $\alpha$  during hypoxia: a mechanism of O2 sensing.  
SO JOURNAL OF BIOLOGICAL CHEMISTRY (2000 Aug 18) 275 (33):25130-8  
Journal code: JBC ISSN: 0021-9725

I 33 ANSWER 19 OF 50 MEDLINE

T1 Wild-type p53 suppresses angiogenesis in human leiomyosarcoma and synovial sarcoma by transcriptional suppression of vascular endothelial growth factor expression  
SO CANCER RESEARCH (2000 Jul 1) 60 (13):3655-61  
Journal code: CNE ISSN: 29847058

I 33 ANSWER 20 OF 50 MEDLINE

T1 Therapeutic efficacy of the suicide gene driven by the promoter of vascular endothelial growth factor gene against hypoxic tumor cells  
SO CANCER RESEARCH (2000 Jun 1) 60 (11):2946-41  
Journal code: CNE ISSN: 29847058

I 33 ANSWER 21 OF 50 MEDLINE

T1 Up-regulation of vascular endothelial growth factor receptor Flk-1 after endothelial denudation: role of transcription factor Egr-1.  
SO BIOLOGY (2000 Jun 1) 95 (11):3387-95  
Journal code: ABO ISSN: 0006-4971

I 33 ANSWER 22 OF 50 MEDLINE

T1 Zinc finger transcription factor Egr-1 activates Flk-1 gene expression in THP-1 cells on induction for macrophage differentiation  
SO AMERICAN JOURNAL OF PHYSIOLOGY (2000 Feb 20) 278 (2):377-84  
Journal code: ABO ISSN: 1079-5642

I 33 ANSWER 23 OF 50 MEDLINE

T1 Hypoxia-induced transcriptional activation of vascular endothelial growth factor is inhibited by serum  
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (2000 Jun 7) 267 (1):344-8  
Journal code: ABO ISSN: 0006-291X

I 33 ANSWER 24 OF 50 MEDLINE

T1 Insulin-induced vascular endothelial growth factor expression in retina  
SO INVESTIGATIVE OPHTHALMOLOGY AND VISUAL SCIENCES (1999 Dec) 40 (13):3281-6  
Journal code: GVL ISSN: 0146-0404

I 33 ANSWER 25 OF 50 MEDLINE

T1 Hypoxia-induced elevation in interleukin-8 expression by human ovarian carcinoma cells  
SO CANCER RESEARCH (1999 Nov 15) 59 (22):5822-9

Journal code: CNE ISSN: 29847058

I 33 ANSWER 26 OF 50 MEDLINE

T1 Phosphorylation of a protein kinase inhibitor: down-regulates hypoxic induction of vascular endothelial growth factor expression in human fibrocytes  
SO CANCER RESEARCH (1999 Nov 1) 59 (21):5433-7  
Journal code: CNE ISSN: 29847058

I 33 ANSWER 27 OF 50 MEDLINE

T1 Role of protein kinase C isoforms in phorbol ester-induced vascular endothelial growth factor expression in human glioblastoma cells  
SO JOURNAL OF BIOLOGICAL CHEMISTRY (1999 May 28) 274 (22):15407-14  
Journal code: JBC ISSN: 0021-9725

I 33 ANSWER 28 OF 50 MEDLINE

T1 Enhancement of gene expression under hypoxic conditions using fragments of the human vascular endothelial growth factor and the erythropoietin genes  
SO INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY, BIOLOGY, PHYSICS (1998 Nov 1) 42 (4):213-6  
Journal code: G97 ISSN: 0360-3016

I 33 ANSWER 29 OF 50 MEDLINE

T1 Homologous up-regulation of KDR Flk-1 receptor expression by vascular endothelial growth factor in vitro  
SO JOURNAL OF BIOLOGICAL CHEMISTRY (1998 Nov 6) 273 (45):29979-85  
Journal code: JBC ISSN: 0021-9725

I 33 ANSWER 30 OF 50 MEDLINE

T1 The vascular endothelial growth factor mRNA contains an internal ribosome entry site  
SO FEBS LETTERS (1998 Sep 4) 444 (3):417-20  
Journal code: FTH ISSN: 0014-5793

I 33 ANSWER 31 OF 50 MEDLINE

T1 Inhibition of hypoxia-inducible factor 1 activity by nitric oxide donors in hypoxia  
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (1998 Jun 23) 95 (13):7368-73  
Journal code: PVS ISSN: 0027-8424

I 33 ANSWER 32 OF 50 MEDLINE

T1 Identification of a human VPE VEGF-3 untranslated region mediating hypoxia-induced mRNA stability  
SO MOLECULAR BIOLOGY OF THE CELL (1998 Feb 9) 9 (2):469-81  
Journal code: BVT ISSN: 1059-1524

I 33 ANSWER 33 OF 50 MEDLINE

T1 Activator-protein-1 binding potentiates the hypoxia-inducible factor-1-mediated hypoxia-induced transcriptional activation of vascular endothelial growth factor expression in C6 glioma cells  
SO BIOCHEMICAL JOURNAL (1997 Oct 15) 327 (Pt 2):419-23  
Journal code: GYO ISSN: 0264-6021

I-33 ANSWER 34 OF 50 MHDI INF

11 Differential transcriptional regulation of the two vascular endothelial growth factor receptor genes, *Flk-1*, but not *Flk-1* KDR, is up-regulated by hypoxia

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Sep 19) 272 (38) 2659-67

Journal code: JBC 0323470 ISSN: 0021-9258

I-33 ANSWER 35 OF 50 MHDI INF

11 Oxygen- and dioxin-regulated gene expression in mouse hepatoma cells

SO KIDNEY INTERNATIONAL (1997 Feb) 51 (2) 567-74

Journal code: KID 0323470 ISSN: 0085-2538

I-33 ANSWER 36 OF 50 MHDI INF

11 Analysis of the promoter region of the human VEGF-related factor gene

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (1997 Jan 13) 230 (2) 413-8

Journal code: BYR 0323516 ISSN: 0006-291X

I-33 ANSWER 37 OF 50 MHDI INF

11 Characterization of the endothelium-specific murine vascular endothelial growth factor receptor-2 (Flk-1) promoter

SO CIRCULATION RESEARCH (1996 Aug) 79 (2) 277-85

Journal code: DIA 0047133 ISSN: 0009-7330

I-33 ANSWER 38 OF 50 MHDI INF

11 Cloning and functional analysis of the promoter for KDR, Flk-1, a receptor for vascular endothelial growth factor

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1995 Sep 29) 270 (39) 1111-8

Journal code: JBC 2985121R ISSN: 0021-9258

I-33 ANSWER 39 OF 50 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

11 CD40 activation induces p53-dependent vascular endothelial growth factor (VEGF) secretion in human multiple myeloma (MM) cells

SO Blood (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 638a.

http: www.bloodjournal.org print

Meeting Info: 43rd Annual Meeting of the American Society of Hematology, Part 1 (Orlando, Florida, USA) December 07-11, 2001

ISSN: 0006-4971

I-33 ANSWER 40 OF 50 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

11 Monocytes rescue endothelial cells from apoptosis: Role of nuclear factor-kappa-B (NF-kappaB)

SO Blood (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 10a

http: www.bloodjournal.org print

Meeting Info: 43rd Annual Meeting of the American Society of Hematology, Part 1 (Orlando, Florida, USA) December 07-11, 2001

ISSN: 0006-4971

I-33 ANSWER 41 OF 50 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

11 Regulation of VEGF gene expression by adenosine: Role of G proteins

SO FASEB Journal (March 7, 2001) Vol. 15, No. 4, pp. A580 print

Meeting Info: Annual Meeting of the Federation of American Societies for

Experimental Biology on Experimental Biology 2001 (Orlando, Florida, USA) March 31 - April 04 2001  
ISSN: 0892-6638

I-33 ANSWER 42 OF 50 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

11 Hypoxia stimulates p53 gene expression

SO Society for Neuroscience Abstracts (2000) Vol. 26, No. 1-2, pp. Abstract No. 19.2 print

Meeting Info: 30th Annual Meeting of the Society of Neuroscience, New Orleans, LA, USA November 04-09, 2000 Society for Neuroscience  
ISSN: 0130-5295

I-33 ANSWER 43 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 Promoter of mouse vascular endothelial growth factor used in drug screening system for diabetes

SO Ipn. Isolan Tokyo Kobo, 5 pp.

CODEN: IKNNAF

I-33 ANSWER 44 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 VEGF-2, VEGFR-2, and Tie2 promoters and reporter genes fused to these promoters for screening for angiogenesis-modulating compounds

SO PCT Int. Appl., 149 pp.

CODEN: PINXD2

I-33 ANSWER 45 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 Targeting constructs for the generation of transgenic animals in which single copy, non-essential gene is replaced with a reporter expression cassette

SO PCT Int. Appl., 96 pp.

CODEN: PINXD2

I-33 ANSWER 46 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 Fusion proteins of transactivating transcription factors and their in expression of foreign genes in animal cells

SO PCT Int. Appl., 81 pp.

CODEN: PINXD2

I-33 ANSWER 47 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 Methods for identifying vasoprotective agents using vascular endothelial cells transfected with reporter genes under control of estrogen-responsive element

SO PCT Int. Appl., 63 pp.

CODEN: PINXD2

I-33 ANSWER 48 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 Flt-1 gene flk-1 promoter sequence: VEGF receptor transcription regulation, endothelial-specific gene expression, and drug screening assay

SO PCT Int. Appl., 70 pp.

CODEN: PINXD2

I-33 ANSWER 49 OF 50 CAPLUS COPYRIGHT 2002 ACS

11 A reporter gene system for identifying morphogen analogs that activate the oncogenic protein-1-responsive element

SO PCT Int. Appl., 70 pp.

CODEN: PINXD2



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1 29 341 S I 20 (P H I 2

1 30 270 S I 20 (S I 2

1 31 128 D I P R E M I 30 (42 D I P H I C A T I S R E M O V E D)

1 32 4210 S I 1 C H E R A S E

1 33 50 S I 31 A N D I 32

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1 35 A N S W E R 1 O F 5 M E D I N E

11 1 podermal growth factor receptor transcriptionally up-regulates vascular  
endothelial growth factor expression in human glioblastoma cells via a  
pathway involving phosphatidylinositol 3'-kinase and distinct from that  
induced by hypoxia

S O C A N C E R R E S E A R C H (2000 Oct 15) 60 (20) 5879-86  
Journal code CNE ISSN 0008-5472

1 35 A N S W E R 2 O F 5 M E D I N E

11 Growth factor activation of the estrogen receptor in vascular cells occurs  
via a mitogen-activated protein kinase-independent pathway.

S O J O U R N A L O F C L I N I C A L I N V E S T I G A T I O N (1998 Jun 15) 101 (12) 2851-61  
Journal code HST 7802877 ISSN 0021-9738

1 35 A N S W E R 3 O F 5 B I O S I S C O P Y R I G H T 2002 B I O L O G I C A L A B S T R A C T S I N C

11 1 podermal growth factor receptor transcriptionally up-regulates vascular  
endothelial growth factor expression in human glioblastoma cells via a  
pathway involving phosphatidylinositol 3'-kinase and distinct from that  
induced by hypoxia

S O C a n c e r R e s e a r c h (October 15, 2000) Vol 60, No 20, pp 5879-5886 print  
ISSN 0008-5472

1 35 A N S W E R 4 O F 5 B I O S I S C O P Y R I G H T 2002 B I O L O G I C A L A B S T R A C T S I N C

11 Growth factor activation of the estrogen receptor in vascular cell soccers  
via a mitogen-activated protein kinase-independent pathway.

S O J o u r n a l o f C l i n i c a l I n v e s t i g a t i o n ( J u n e 1 5 , 1 9 9 8 ) V o l 1 0 1 , N o 1 2 , p p .  
2851-2861  
ISSN 0021-9738

1 35 A N S W E R 5 O F 5 C A P I T A S C O P Y R I G H T 2002 A C S

11 1 pterma growth factor receptor transcriptionally up-regulates vascular  
endothelial growth factor expression in human glioblastoma cells via a  
pathway involving phosphatidylinositol 3'-kinase and distinct from that  
induced by hypoxia

S O C a n c e r R e s e a r c h (2000) 60(20) 5879-5886  
CODEN CNREAH ISSN 0008-5472

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1 35 A N S W E R 4 O F 5 B I O S I S C O P Y R I G H T 2002 B I O L O G I C A L A B S T R A C T S I N C  
ACCESSION NUMBER: 1998:357915 B I O S I S  
DOC NUMBER NUMBER: PRE-V199800357915

111111 Growth factor activation of the estrogen receptor in  
vascular cell soccers via a mitogen-activated protein

kinase-independent pathway.

A T T H O R S : Karas, Richard H. (1); Gaier, Elizabeth Ann; Bieber, Halbe  
E.; Baur, Wendy E.; Mendelsohn, Michael E.

C O R P O R A T I O N : (1) Mol. Cardiol. Res. Cent., New Engl. Med. Cent., 750  
Washington St., No. 80 Boston, MA 02111 USA

S O U R C E : J o u r n a l o f C l i n i c a l I n v e s t i g a t i o n ( J u n e 1 5 , 1 9 9 8 ) V o l  
101, No. 12, pp. 2851-2861.  
ISSN: 0021-9738

D O C U M E N T T Y P E : Article

L A N G U A G E : English

A B : The classical estrogen receptor ERalpha mediates many of the known  
cardiovascular effects of estrogen and is expressed in male and female  
vascular cells. Estrogen-independent activation of ERalpha is known to  
occur in cells from reproductive tissues, but has not been investigated  
previously in vascular cells. In this study, transient transfection assays  
in human saphenous vein smooth muscle cells (HSVSMC) and putmonary vein  
endothelial cells (PVEC) demonstrated ERalpha-dependent activation of  
estrogen response element-based, and **vascular  
endothelial growth factor**-based  
**reporter** plasmids by both estrogen-deficient TBS (E2-EBS) and EGF  
in nonvascular cells. ERalpha-mediated gene expression can be activated  
via a togen-activated protein (MAP) kinase induced

phosphorylation of serine 118 of ERalpha. However, in vascular cells, we  
found that pharmacologic inhibition of **MAP kinase** did  
not alter EGF-mediated ERalpha activation. In addition, a mutant ER  
containing an alanine-for-serine substitution at position 118 was

active to the same degree as the wild-type receptor by E2-EBS and EGF  
in both HSVSMC and PVEC. Furthermore, constitutively active **MAP  
kinase** kinase (MAPKK) activated ERalpha in Cos1 cells as expected,  
but MAPKK inhibited ER activation in PVEC. We conclude that growth factors

also stimulate ERalpha-mediated gene expression in vascular cells, but  
find that this occurs via a **MAP kinase**-independent  
pathway distinct from that reported previously in nonvascular cells

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I 36 2279 J 8 OR 1 10  
S 136 S 112  
I 37 208 J 36 S 1 12  
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I 38 81 J 37 AND 1 32  
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PROCESsing COMPILETED FOR 138  
I 39 44 DI P 41 N 1 38 (37 DI P 13 C VTE S RENOVYD)  
d b so 1-44  
I 39 ANSWER 1 OF 44 MEDLINE  
11 Acidic extracellular pH induces vascular endothelial growth factor (VEGF) in human glioblastoma cells via ERK1/2 MAPK signaling pathway: mechanism of low pH-induced VEGF  
SO JOL RN M OF BIOLOGICAL CHEMISTRY (2002 Mar 29) 277 (13) 1368-74  
Journal code 2985121R ISSN 0021-9258  
DI P 13 C VTE 1  
I 39 ANSWER 2 OF 44 MEDLINE  
11 Lithium induces gene expression through lymphoid enhancer-binding factor-1 cell factor responsive element in rat PC12 cells.  
SO NEUROSCIENCE LETTERS (2002 Jun 4) 317 (1) 50-2  
Journal code 7600130 ISSN 0304-3940  
DI P 13 C VTE 2  
I 39 ANSWER 3 OF 44 MEDLINE  
11 Presenilin 1 regulates beta-catenin-mediated transcription in a glyoxen synthase kinase-3-independent fashion.  
SO JOL RN M OF BIOLOGICAL CHEMISTRY (2001 Oct 19) 276 (42) 48563-9  
Journal code 2985121R ISSN 0021-9258  
DI P 13 C VTE 3  
I 39 ANSWER 4 OF 44 MEDLINE  
11 Induction-independent recruitment of CREB-binding protein to the c-fos serum response element through interactions between the bromodomain and Rb-1  
SO JOL RN M OF BIOLOGICAL CHEMISTRY (2001 Feb 16) 276 (7) 5213-21  
Journal code 2985121R ISSN 0021-9258  
DI P 13 C VTE 4  
I 39 ANSWER 5 OF 44 MEDLINE  
11 Mitochondrial box transcription factors interact with c-myc-related co-repressors  
SO NUCLEIC ACIDS RESEARCH (2001 Apr 1) 29 (7) 1410-9  
Journal code 0810411011 ISSN 1362-4962  
DI P 13 C VTE 5  
I 39 ANSWER 6 OF 44 MEDLINE  
11 The p14 subfamily of Ets transcription factors synergizes with beta-catenin-133-1 to activate matrix-specific transcription in intestinal tumors  
SO MOLECULAR AND CELLULAR BIOLOGY (2001 Feb 21) 21 (4) 1370-83  
Journal code 0270-8109 ISSN 0270-7306  
DI P 13 C VTE 6  
I 39 ANSWER 7 OF 44 MEDLINE  
11 Reduced expression of Wnt-1 and E-cadherin, and diminished beta-catenin stability in MCF-7 breast cancer cells that overexpress protein kinase C-alpha  
SO JOURNAL OF CELL BIOLOGY (2001 Dec) 19 (6) 1227-33  
Journal code 9306042 ISSN 1019-6449  
DI P 13 C VTE 7  
I 39 ANSWER 8 OF 44 MEDLINE  
11 Tumor suppressor PTEN inhibits nuclear accumulation of beta-catenin and T cell lymphoid enhancer factor-1-mediated transcriptional activation  
SO JOL RN M OF CELL BIOLOGY (2001 Jun 11) 153 (6) 1161-74  
Journal code 0378356 ISSN 0021-9525  
DI P 13 C VTE 8  
I 39 ANSWER 9 OF 44 MEDLINE  
11 The anthocyanidins cyanidin and delphinidin are potent inhibitors of the epidermal growth-factor receptor.  
SO JOL RN M OF AGRICULTURAL AND FOOD CHEMISTRY (2001 Feb 49) 21 958-62  
Journal code 1330374755 ISSN 0021-8561  
DI P 13 C VTE 9  
I 39 ANSWER 10 OF 44 MEDLINE  
11 Characterization of the human UDP-galactose 4-epimerase/galactose-1-phosphate transferase gene promoter  
SO BIOCHEMICAL BIOPHYSICAL ACTA (2001 Feb 16) 1517 (3) 419-23  
Journal code 00060217513 ISSN 0006-3002  
DI P 13 C VTE 10  
I 39 ANSWER 11 OF 44 MEDLINE  
11 Perturbation of the tight junction permeability barrier by occludin loop peptides activates beta-catenin/Tcf-1-mediated transcription  
SO EMBO REPORTS (2001 Apr 2) 2 (4) 306-12  
Journal code 100963049 ISSN 1469-221X  
DI P 13 C VTE 11  
I 39 ANSWER 12 OF 44 MEDLINE  
11 BROSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
11 T1E1 binds to the promoter of neutrophil elastase gene to up-regulate its expression  
SO Blood (November 16, 2001) Vol 98, No. 11 Part 1, pp. 282a-283a  
http://www.bloodjournal.org; print  
Meeting Info: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001  
ISSN 0006-4971  
DI P 13 C VTE 12  
I 39 ANSWER 13 OF 44 MEDLINE  
11 Mutant E-cadherin breast cancer cells do not display constitutive Wnt signaling  
SO CANCER RESEARCH (2001 Jan 1) 61 (1) 278-84  
Journal code CNE ISSN 0008-5472  
DI P 13 C VTE 13  
I 39 ANSWER 14 OF 44 MEDLINE  
11 Insulin and IGF-1 stimulate the beta-catenin pathway through two signaling cascades involving GSK-3beta inhibition and Ras activation.  
SO ONCOGENE (2001 Jan 11) 20 (2) 252-9  
Journal code ONC 8711562 ISSN 0950-9232  
DI P 13 C VTE 14  
I 39 ANSWER 15 OF 44 MEDLINE  
11

11. Protein kinase C  $\alpha$ mu selectively activates the mitogen-activated protein kinase (MAPK) p42 pathway.

SO: 11781 J. CELL PHYSIOL. (2001 Mar 9) 492 (1-2):39-44  
Journal code: JCPH: 0155157 ISSN: 0014-5793

I 39. ANSWER 16 OF 44 MEDLINE  
11. Transcriptional regulation by Smads: crosstalk between the TGF-beta and Wnt pathways

SO: JOURNAL OF BIOCHEMICAL AND BIOPHYSICAL SCIENCES (2001) 33: A Suppl 1  
(P133A1-9) Ref: 40  
Journal code: JBBS: 0014030 ISSN: 0021-9355

I 39. ANSWER 17 OF 44 MEDLINE

11. A bombesin receptor subtype-3 peptide increases nuclear oncogene expression in a MEK-1 dependent manner in human lung cancer cells.

SO: EUROPEAN JOURNAL OF CELLULAR PHYSIOLOGY (2001 Jan 19) 412 (1):13-20  
Journal code: EJCP: 1254354 ISSN: 0014-2999

I 39. ANSWER 18 OF 44 MEDLINE

11. Rn, a non-lipid-modified Ras-related protein, transforms NIH3T3 cells without activating the ERK, JNK, p38 MAPK or PI3K/Akt pathways.

SO: ONCOGENE (2000 Sep 28) 19 (41):4685-94  
Journal code: ONC: ISSN: 0950-6232

I 39. ANSWER 19 OF 44 MEDLINE

11. Increased effect of interferon gamma on PDGF-induced c-fos gene transcription in glomerular mesangial cells: differential effect of the transcriptional coactivator CBP on STAT1alpha activation.

SO: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (2000 Jul 14) 273 (3):1069-77  
Journal code: BBRC: 0372516 ISSN: 0006-291X

I 39. ANSWER 20 OF 44 MEDLINE

11. Characterization of hPrp24 kinase activation: potential role in signaling.

SO: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (2000 May 10) 271 (2):456-63  
Journal code: BBRC: 0372516 ISSN: 0006-291X

I 39. ANSWER 21 OF 44 MEDLINE

11. Transcriptional regulation and apoptosis induction by Tcf/beta-catenin complex in various T-cells.

SO: Korean Journal of Biological Sciences (December 2000) Vol. 4, No. 4, pp 489-504 print  
ISSN: 1226-5071

I 39. ANSWER 22 OF 44 MEDLINE

11. The transcriptional coactivator CBP interacts with beta-catenin to activate gene expression

SO: JOURNAL OF CELLULAR BIOLOGY (2000 Apr 17) 149 (2):249-54  
Journal code: JBNY: 0375336 ISSN: 0021-9525

I 39. ANSWER 23 OF 44 MEDLINE

11. Apical protein kinase C-zeta stimulates thyrotropin-independent proliferation in rat thyroid cells.

SO: ENDOCRINOLOGY (2000 Jun) 141 (1):146-52  
Journal code: EGG: 0378040 ISSN: 0013-7227

I 39. ANSWER 24 OF 44 MEDLINE

11. Rat TGF-beta receptor type 2 exhibits higher basal signaling activity than TRH receptor type 1

SO: ENDOCRINOLOGY (1999 Oct) 140 (10):4916-9  
Journal code: EGG: 0378040 ISSN: 0013-7227

I 39. ANSWER 25 OF 44 MEDLINE

11. Regulation of MCL1 through a serum response factor Etk-1-mediated mechanism links expression of a viability-promoting member of the BCL-2 family to the induction of hematopoietic cell differentiation.

SO: JOURNAL OF BIOLOGICAL CHEMISTRY (1999 Jan 5) 274 (3):1801-13  
Journal code: JBC: 2985121R ISSN: 0021-9258

I 39. ANSWER 26 OF 44 MEDLINE

11. Novel roles of specific isoforms of protein kinase C in activation of the c-fos serum response element

SO: MOLECULAR AND CELLULAR BIOLOGY (1999 Feb) 19 (2):624  
Journal code: MCB: 0270-7306

I 39. ANSWER 27 OF 44 MEDLINE

11. Protein phosphatase 2A suppresses MAP kinase signalling and ectopic protein expression.

SO: CELLULAR SIGNALING (1999 Aug) 11 (8):575-80  
Journal code: AYB: 8904683 ISSN: 0898-6568

I 39. ANSWER 28 OF 44 MEDLINE

11. Nitric oxide regulates shear stress-induced early growth response-1 expression via the extracellular signal-regulated kinase pathway in endothelial cells.

SO: CIRCULATION RESEARCH (1999 Aug 6) 85 (3):238-46  
Journal code: DAV: 0047103 ISSN: 0009-7330

I 39. ANSWER 29 OF 44 MEDLINE

11. The C-terminal transactivation domain of beta-catenin is necessary and sufficient for signaling by the TCF-1/beta-catenin complex in Xenopus laevis.

SO: MOLECULAR SIGNALING (1999 Mar) 81 (1-2):65-74  
Journal code: ANE: 9101218 ISSN: 0925-4773

I 39. ANSWER 30 OF 44 MEDLINE

11. Direct regulation of the Xenopus engrailed-2 promoter by the Wnt signaling pathway, and a molecular screen for Wnt-responsive genes, confirm a role for Wnt signaling during neural patterning in Xenopus.

SO: MOLECULAR SIGNALING (1999 Sep) 87 (1-2):21-32  
Journal code: ANE: 9101218 ISSN: 0925-4773

I 39. ANSWER 31 OF 44 MEDLINE

11. Wnt signaling and transcriptional control of Shn in Xenopus embryos.

SO: JOURNAL OF CELLULAR PHYSIOLOGY (2000 Apr 17) 149 (2):249-54  
Journal code: JBNY: 0375336 ISSN: 0021-9525



SO Proceedings of the National Academy of Sciences of the United States of America (Mar 12, 1998) Vol 95, No 10, pp 5626-5631  
ISSN 0027-8424

I 39 ANSWER 32 OF 44 MEDLINE

TI Two members of the Tec family implicated in Wnt/beta-catenin signaling during embryogenesis in the mouse

SO MOLECULAR AND CELLULAR BIOLOGY (1998 Mar) 18 (3) 1248-50

Journal code: NCY 8109087 ISSN 0270-7306

I 39 ANSWER 33 OF 44 MEDLINE

TI The G protein-binding protein (GTP) cooperates with the serum response factor for transcription of the c-fos serum response element

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Dec 5) 272 (49) 3110-21

Journal code: HHV 2985121R ISSN 0021-9258

I 39 ANSWER 34 OF 44 MEDLINE

TI Gastrin and phorbol 12-myristate 13-acetate regulate the human histidine decarboxylase promoter through Raf-dependent activation of extracellular signal-regulated kinase-related signaling pathways in gastric cancer cells

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Oct 24) 272 (43) 27015-24

Journal code: HHV 2985121R ISSN 0021-9258

I 39 ANSWER 35 OF 44 MEDLINE

TI Growth hormone regulates ternary complex factors and serum response factor associated with the c-fos serum response element

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Oct 10) 272 (41) 25951-8

Journal code: HHV 2985121R ISSN 0021-9258

I 39 ANSWER 36 OF 44 MEDLINE

TI Identification of a replication-competent pathogenic human immunodeficiency virus type 1 with a duplication in the 3'-LTR alpha region but lacking NF-kappaB binding sites

SO JOURNAL OF VIROLOGY (1997 Feb) 71 (2) 1651-6

Journal code: KCV 0113724 ISSN 0022-538X

I 39 ANSWER 37 OF 44 MEDLINE

TI Functional role of extracellular signal-regulated protein kinases in gastric acid secretion

SO AMERICAN JOURNAL OF PHYSIOLOGY (1997 Dec) 274 (6 Pt 1) D6A-72

Journal code: KR 0370511 ISSN 0002-9513

I 39 ANSWER 38 OF 44 MEDLINE

TI A role for the small GTPase Rac in poliovirus middle-1 antigen-mediated activation of the serum response element and in cell transformation

SO ONCOGENE (1997 Mar 13) 14 (10) 1235-41

Journal code: ONC 8711562 ISSN 0950-9232

I 39 ANSWER 39 OF 44 MEDLINE

TI Molecular mechanisms for the growth factor action of gastrin

SO AMERICAN JOURNAL OF PHYSIOLOGY (1997 Oct 27) 274 (4 Pt 1) G891-8

Journal code: KR 0370511 ISSN 0002-9513

I 39 ANSWER 34 OF 44 MEDLINE

TI Molecular mechanisms for somatostatin inhibition of c-fos gene expression

SO AMERICAN JOURNAL OF PHYSIOLOGY (1997 Apr) 272 (4 Pt 2) G721-6

Journal code: KR 0370511 ISSN 0002-9513

I 39 ANSWER 41 OF 44 MEDLINE

TI Tissue-inducible Egr-1 transcription in renal inner medullary collecting duct (mCD3) cells is mediated by extracellular signal-regulated kinase activation

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (1996 Oct 1) 93 (20) 11242-7

Journal code: PVS 7505876 ISSN 0027-8424

I 39 ANSWER 42 OF 44 MEDLINE

TI Regulation of mitogen-activated protein kinases by a calcium calmodulin-dependent protein kinase cascade

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (1996 Oct 1) 93 (20) 10803-8

Journal code: PVS 7505876 ISSN 0027-8424

I 39 ANSWER 43 OF 44 MEDLINE

TI Serum response element and flanking sequences mediate the synergistic transcriptional activation of c-fos by 12-O-tetradecanoylphorbol-13-acetate and cholera toxin in AHR-21b cells

SO CELL GROWTH AND DIFFERENTIATION (1995 Aug) 6 (8) 955-64

Journal code: VTH 9100024 ISSN 1044-9523

I 39 ANSWER 44 OF 44 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

TI Human immunodeficiency virus 1 tat stimulates transcription of the transforming growth factor alpha gene in an epidermal growth factor-dependent manner

SO Cell Growth & Differentiation (1994) Vol 5, No 1, pp 87-93

ISSN: 1044-9523

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Al $\alpha$ -Synuclein has been identified as a component of Lewy bodies in Parkinson's disease and diffuse Lewy body disease, and glial cytoplasmic inclusions (GICs) in multiple system atrophy (MSA). To explore the role of alpha-synuclein in the pathogenesis, we searched for molecules interacting with alpha-synuclein and discovered that GICs are stained by anti-Elk-1 antibody. To seek the role of Elk-1 in synucleinopathies, we cotransfected alpha-synuclein and Elk-1 to cultured cells and found small granular structure complexes where the two molecules colocalized. Moreover, alpha-synuclein and Elk-1 were coimmunoprecipitated from the cell lysates. For formation of the complex, the presence of both LTRs and Bbox domains of Elk-1 was required. Although there was no evidence of direct binding between alpha-synuclein and Elk-1, we discovered that alpha-synuclein and Elk-1 both bind to ERK2, a MAP kinase. The effect of alpha-synuclein on the MAP kinase pathway was assessed using the PathDetect system, which showed prominent attenuation of Elk-1 phosphorylation with alpha-synuclein, and especially, A531 mutant. Our results suggest that alpha-synuclein reacts with the MAP kinase pathway, which might cause dysfunction of neurons and oligodendrocytes and lead to neurodegeneration in Parkinson's disease and MSA.

14. ANSALTER ZOT 2. C API US COPYRIGHT 2002. ACS  
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E111 E Activation of the 9L3 cC-MF chemokine by phorbol esters occurs via multiple signal transduction pathways that converge to NF-K1 ERK2 and activate the Elk1 transcription factor  
L. Qidong, Yungankar, Sucheta M., Green, Harry M.; Matur-Schreier, Manuela  
CORPORATE SOCIETY Department of Biology, University of California, Riverside, CA 92521, USA  
SOCIETY 15454-15465  
CODING JBCHEM, ISSN: 0021-9258  
PUBLISHER American Society for Biochemistry and Molecular Biology  
DOCT ME NT TYPE Journal  
LANGUAG English  
ABSTRACT Using primary fibroblasts in culture, the authors investigated the signal transduction mechanisms by which phorbol esters, a class of tumor promoters, activate the 9L3 gene and its chemokine product: the chicken chemokine and angiogenic factor (cC-MF). This gene is highly stimulated by phorbol 12,13-dibutyrate (PDBu) via 3 pathways: (1) a small contribution via protein kinase C (the commonly recognized pathway for these tumor promoters); (2) a contribution involving tyrosine kinases, and (3) a larger contribution via pathways that can be interrupted by dexamethasone. All 3 of these pathways converge into the mitogen-activated protein kinases, MAPK1/ERK2. Using a luciferase reporter system, the authors show that although both the MAP1 and PDBu kappa B (a NF kappa B-like factor in chickens) response elements are capable of

activating in these normal cells, regions of the 9L3 promoter containing them are unresponsive to PDBu stimulation. In contrast, the authors show for the first time that activation by PDBu occurs through a segment of the promoter containing Elk1 response elements: deletion and mutation of these elements abrogates 9L3 chicken chemokine and angiogenic factor expression. Electrophoretic mobility shift assays and functional studies using PathDetect systems show that stimulation of the cells by phorbol esters leads to activation of the Elk1 transcription factor, which binds to its element in the 9L3 promoter.  
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 SO Placenta (January, 2002) Vol. 23, No. 1, pp. 100-101 pr nt.  
 ISSN: 0143-4004

1 4 ANSWER 2 OF 63 CAPLUS COPYRIGHT 2002 ACS  
 IT Preparation of pyrazines as modulators of **vascular endothelial growth factor (VEGF)**  
 receptor tyrosine kinase

SO PCT Int. Appl. 2002 pp.  
 CODEN: PIXND2

1 4 ANSWER 3 OF 63 CAPLUS COPYRIGHT 2002 ACS  
 IT Human stress genes identified using DNA microarrays  
 SO US Pat. Appl. Publ., 57 pp., Cont-in-part of US Ser. No. 441,920  
 CODEN: USXXCO

1 4 ANSWER 4 OF 63 MEDLINE DEPLICATE 1  
 IT Cyclooxygenase-1 is up-regulated in cervical carcinomas:  
 autocrine paracrine regulation of cyclooxygenase-2, prostaglandin e  
 receptors, and angiogenic factors by cyclooxygenase-1  
 SO CANCER RES: ARCL (2002 Jan 15) 62 (2):424-32  
 Journal code 2984705R ISSN: 0008-5472

1 4 ANSWER 5 OF 63 MEDLINE DEPLICATE 2  
 IT Histone deacetylase inhibitor FK228 inhibits tumor angiogenesis  
 SO INT J NUTR VI JOL RN VI OF CANCER (2002 Jan 29) 97 (3):290-6  
 Journal code 0042124 ISSN: 0020-7136

1 4 ANSWER 6 OF 63 CAPLUS COPYRIGHT 2002 ACS  
 IT Isoform-specific expression of hypoxia-inducible factor-1 alpha during  
 the late stages of mouse spermiogenesis  
 SO Molecular Endocrinology (2002) 16(2):234-243  
 CODEN: MOENEN ISSN: 0888-8809

1 4 ANSWER 7 OF 63 MEDLINE DEPLICATE 3  
 IT Gonadotropin A, an antitumoral polypeptide, exhibits antiangiogenic  
 activities via inhibition of actin reorganization in endothelial cells.  
 SO JOURNAL OF CELLULAR PHYSIOLOGY (2002 Jan) 190 (1):109-16  
 Journal code: 0050222 ISSN: 0021-9541

1 4 ANSWER 8 OF 63 MEDLINE DEPLICATE 4  
 IT Synergistic cooperation between hypoxia and transforming growth  
 factor- $\alpha$  pathways on human **vascular endothelial growth factor** gene expression

SO JOURNAL OF BIOLOGICAL CHEMISTRY (2001 Oct 19) 276 (42) 38527-35  
Journal code: 2985121R ISSN: 0021-9258

I-4 ANSWER 9 OF 63 MEDLINE DT PLICATE 5

IT The constitutive phosphatogenesis 9 signalosome directs **vascular endothelial growth factor** production in tumor cells

SO CANCELRIPSE ARCH (2001 Dec 1) 61 (23) 8416-21  
Journal code: 2984705R ISSN: 0008-5472

I-4 ANSWER 10 OF 63 MEDLINE

IT Regulation of **vascular endothelial growth factor**

factor by the Wnt and k-ras pathways in colorectal neoplasia  
SO CANCELRIPSE ARCH (2001 Aug 15) 61 (16) 6050-4  
Journal code: CNE 2984705R ISSN: 0008-5472

I-4 ANSWER 11 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT A single autophosphorylation site on KDR, Flk-1 is essential for VEGF-A-dependent activation of PI 3-kinase and DNA synthesis in vascular endothelial cells

SO EMBO (European Molecular Biology Organization) Journal (June 1, 2001) Vol 20, No 11, pp 2768-2778 print  
ISSN: 0261-4189

I-4 ANSWER 12 OF 63 CAPTUS COPYRIGHT 2002 VCS

IT Dissecting hypoxia-dependent and hypoxia-independent steps in the HIF-1 alpha activation cascade: implications for HIF-1 alpha gene therapy

SO FASEB Journal (2001) 15(14) 2715-2717, 10.1096/fj.01-0546jfc  
CODEN: FASEC ISSN: 0892-6638

I-4 ANSWER 13 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Identification of hypoxia-inducible factor 1 ancillary sequence and its function in **vascular endothelial growth factor** gene induction by hypoxia and nitric oxide

SO Journal of Biological Chemistry (January 19, 2001) Vol 276, No 3, pp 2292-2298 print  
ISSN: 0021-9258

I-4 ANSWER 14 OF 63 MEDLINE DT PLICATE 6

IT HIF-1 expression in healing wounds: HIF-1 alpha induction in primary inflammatory cells by TNF-alpha  
SO AMERICAN JOURNAL OF PHYSIOLOGY (2001 Dec) 281 (6) C1971-7  
Journal code: 109901225 ISSN: 0363-6143

I-4 ANSWER 15 OF 63 CAPTUS COPYRIGHT 2002 VCS

IT HIF-1 expression in healing wounds: HIF-1 alpha induction in primary inflammatory cells by TNF-alpha  
SO American Journal of Physiology (2001) 281(6 Pt 1) C1971-C1977  
CODEN: AJPHAF ISSN: 0002-9513

I-4 ANSWER 16 OF 63 MEDLINE

IT Inhibitory P53 domain protein is a negative regulator of hypoxia-inducible

gene expression

SO NATURE (2001 Nov 29) 414 (6863) 550-4  
Journal code: 0410462 ISSN: 0028-0836

I-4 ANSWER 17 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT The transcriptional corepressor NAB2 blocks Egr-1-mediated growth factor activation and angiogenesis

SO Biochemical and Biophysical Research Communications (May 4, 2001) Vol 283, No 2, pp 480-486 print  
ISSN: 0006-291X

I-4 ANSWER 18 OF 63 MEDLINE DT PLICATE 8

IT Efficient expression of the **vascular endothelial growth factor** gene in vitro and in vivo, using an adenovirus-associated virus vector

SO JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY (2001 Feb) 33 (2) 295-305  
Journal code: J72 0262322 ISSN: 0022-2828

I-4 ANSWER 19 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Murmur an gene expression in hypoxic conditions  
SO Zoology (Jena) (2001) Vol 104, No 3-4, pp 192-197 print  
ISSN: 0944-2006

I-4 ANSWER 20 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Akt1 phosphorylation enhances radiation-induced cytotoxicity and inhibits angiogenesis in vitro

SO International Journal of Radiation Oncology Biology Physics (2001) Vol 51, No 3 Supplement 1, pp 155 http://www.elsevier.com/locate/ijrobp  
http://www.elsevier.com/locate/ijrobp

Meeting Info: 43rd Annual Meeting of the American Society for Therapeutic Radiology and Oncology, San Francisco, CA, USA November 04-08, 2001  
ISSN: 0360-3016

I-4 ANSWER 21 OF 63 MEDLINE

IT Hypoxia-stimulated expression of angiogenic growth factors in cervical cancer cells and cervical cancer-derived fibroblasts

SO International Journal of Cancer (2001 Mar-Apr) 111(2) 137-42  
Journal code: J7P 9111626 ISSN: 1048-891X

I-4 ANSWER 22 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Isolation of potential pathways for VEGF-mediated renal cell tumorigenesis: Disruption of the VEGF-hypoxia inducible factor alpha interaction

SO Journal of Cell Biology (May, 2001) Vol. 165, No. 5 Supplement, pp. 125-126 print  
Meeting Info: Annual Meeting of the American Urological Association, Inc, Anaheim, California, USA June 02-07, 2001  
ISSN: 0022-5347

I-4 ANSWER 23 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT HIF-1 and AP-1 cooperate to increase gene expression in hypoxia: Role of MAP kinases

SO JOURNAL OF CELL PHYSIOLOGY (July, 2001) Vol 52, No 1-2, pp 49-53 print  
ISSN: 1521-6543

I-4 ANSWER 24 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 VEGF is regulated by the Wnt pathway in colon cancer.

SO Gastroenterology. (April 2001) Vol. 120, No. 5 Supplement 1, pp. A-4

http://www.gastrojournal.org print

Meeting Info.: 102nd Annual Meeting of the American Gastroenterological Association and Digestive Disease Week, Atlanta, Georgia, USA May 20-23, 2001

ISSN: 0016-5085

I-4 ANSWER 25 OF 63 MEDLINE

I1 Stress-activated protein kinases (JNK and p38 HOK) are essential for

**vascular endothelial growth factor**

mRNA stability

SO JOURNAL OF BIOLOGICAL CHEMISTRY. (2000 Aug 25) 275 (34) 26184-91

Journal code: JBC. 2985121R ISSN: 0021-9258

I-4 ANSWER 26 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 Hs poma-inducible expression of tumor-associated carbonic anhydrases

SO Cancer Research. (December 15, 2000) Vol. 60, No. 24, pp. 7075-7083.

print

ISSN: 0008-5472

I-4 ANSWER 27 OF 63 MEDLINE

I1 Oncogenes and tumor angiogenesis: the HPV-16 E6 oncoprotein activates the

**vascular endothelial growth factor**

VEGF gene promoter in a p53 independent manner

SO ONCOLOGY. (2000 Sep 21) 19 (40) 4611-20

Journal code: ONSC. ISSN: 0950-9232

I-4 ANSWER 28 OF 63 MEDLINE

I1 Identification of functional estrogen response elements in the gene coding

for the potent angiogenic factor **vascular endothelial**

**growth factor**

SO CANCER RESEARCH. (2000 Jun 15) 60 (12) 3183-90

Journal code: CNE. 2984705R ISSN: 0008-5472

I-4 ANSWER 29 OF 63 MEDLINE

I1 Angiogenesis is induced in a rabbit model of hindlimb ischemia by naked

DNA encoding an HIF-1alpha VPI6 hybrid transcription factor

SO CIRCULATION. (2000 Oct 31) 102 (18) 2255-61.

Journal code: DAW. 0147763 ISSN: 1524-4539

I-4 ANSWER 30 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 Semaphorin 31A VPI6 localization in malignant human lung and cell lines. A

suggested role in cell adhesion and cell migration

SO American Journal of Pathology. (March 2000) Vol. 156, No. 3, pp. 938-950

print

ISSN: 0002-9440

I-4 ANSWER 31 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 Regulation of **vascular endothelial growth**

**factor** expression in human keratinocytes by retinoids

SO Journal of Biological Chemistry. (January 7, 2000) Vol. 275, No. 1, pp.

642-650 print

ISSN: 0021-9258

I-4 ANSWER 32 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 The role of COP9 signalosome in regulating VEGF production in

tumor cells

SO Laryngoscope. Archives of Surgery. (December 2000) Vol. 136, No. 8, pp.

541 print

Meeting Info.: Joint Surgical Research Meeting, Tuebeck, Germany November 09-11, 2000

ISSN: 1433-2443

I-4 ANSWER 33 OF 63 MEDLINE

I1 Angiotensin-II protects the adult vasculature against plasma leakage

SO NEUROPHARMACOLOGY. (2000 Apr) 6 (4) 460-3

Journal code: CGS. 9502015 ISSN: 1078-8956

I-4 ANSWER 34 OF 63 MEDLINE

I1 Impaired angiogenic balance and suppression of tumorigenicity in

HeLa cells chronically exposed to interferon-alpha

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS. (2000 Oct 27) 277 (2)

410-6.

Journal code: NYR. ISSN: 0006-291X

I-4 ANSWER 35 OF 63 MEDLINE

I1 A novel transcriptional factor with Ser/Thr kinase activity involved in

the transforming growth factor (TGF)-beta signalling pathway

SO BIOCHEMICAL JOURNAL. (2000 Sep 1) 350 Pt 2 595-604

Journal code: 2984726R ISSN: 0264-6021

I-4 ANSWER 36 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

I1 Intracellular Ca<sup>2+</sup> signalling by endothelin and angiotensin

SO Journal of the American Society of Nephrology. (September 2000) Vol. 11,

No. Program and Abstract Issue, pp. 361A http://www.jasn.org print

Meeting Info.: 33rd Annual Meeting of the American Society of Nephrology

and the 2000 Renal Week, Toronto, Ontario, Canada October 10-16, 2000

ISSN: 1046-6673

I-4 ANSWER 37 OF 63 CAPLIS COPYRIGHT 2002 ACS

I1 Novel targeted ultrasound imaging contrast agents for diagnostic and

therapeutic use

SO PCT Int. Appl. 223 pp.

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I-4 ANSWER 38 OF 63 MEDLINE

I1 A quantitative analysis of the reduction in oxygen levels required to

induce up-regulation of **vascular endothelial**

**growth factor (VEGF)** mRNA in cervical cancer

cell lines

SO PRACTICAL RESEARCH OF CANCER. (1999 Jul) 80 (10) 1518-24

Journal code: AY4. 0370635 ISSN: 0007-0929

I-4 ANSWER 39 OF 63 MEDLINE

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II Transcription-dependent nuclear-cytoplasmic trafficking is required for the function of the von Hippel-Lindau tumor suppressor protein.  
 SO MOLECULAR AND CELLULAR BIOLOGY. (1999 Feb) 19 (2) 1486-57  
 Journal code: 8109087 ISSN: 0270-7306

I-4 ANSWER 40 OF 63 MEDLINE  
 II Okadaic acid stimulates the expression of **vascular endothelial growth factor** gene  
 SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS. (1999 Nov 19) 265 (2)  
 584-8  
 Journal code: 9Y8: 0372516 ISSN: 0006-291X

I-4 ANSWER 41 OF 63 MEDLINE  
 II Wide spectrum of antitumor activity of a neutralizing monoclonal antibody to human **vascular endothelial growth factor**  
 SO JAPANESE JOURNAL OF CANCER RESEARCH. (1999 Jan) 90 (1) 93-100  
 Journal code: EBX: 8509:12 ISSN: 0910-5050

I-4 ANSWER 42 OF 63 MEDLINE  
 II Inhibition of hypoxia-inducible factor 1 activity by nitric oxide donors in hypoxia  
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA. (1998 Jun 23) 95 (13) 7368-73  
 Journal code: PY3: 7505876 ISSN: 0027-8424

I-4 ANSWER 43 OF 63 MEDLINE  
 II Induction of endothelial PAS domain protein-1 by hypoxia: characterization and comparison with hypoxia-inducible factor-1alpha  
 SO BIOLOGY. (1998 Oct 1) 92 (7) 2260-8  
 Journal code: ABG: 7603509 ISSN: 0006-4971

I-4 ANSWER 44 OF 63 MEDLINE  
 II Transcriptional responses mediated by hypoxia-inducible factor 1  
 SO Kyoto University Symposium for Life Science and Medicine (1998, 10 Oxygen Homeostasis and Its Dynamics) 421-427  
 Journal code: KJSM19

I-4 ANSWER 45 OF 63 MEDLINE  
 II Regulation of **vascular endothelial growth factor (VEGF)** expression is mediated by internal initiation of translation and alternative initiation of transcription  
 SO Oncogene. (July 16, 1998) Vol. 17, No. 2, pp. 227-236  
 ISSN: 0950-9232

I-4 ANSWER 46 OF 63 MEDLINE  
 II Differential transcriptional regulation of the two **vascular endothelial growth factor** receptor genes  
 II-1 but not II-2 KDR is up-regulated by hypoxia  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY. (1997 Sep 19) 272 (38) 23659-67  
 Journal code: HHV: 2985121R ISSN: 0021-9258

I-4 ANSWER 47 OF 63 MEDLINE  
 II Nuclear protein interactions with the human KDR IIK-1 promoter in vivo  
 II Regulation of Sp1 binding is associated with cell type-specific expression  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY. (1997 Mar 28) 272 (13) 8410-6  
 Journal code: HHV: 2985121R ISSN: 0021-9258

I-4 ANSWER 48 OF 63 MEDLINE  
 II VEGF-145, a secreted **vascular endothelial growth factor** isoform that binds to extracellular matrix  
 SO Journal of Biological Chemistry. (1997) Vol. 272, No. 11, pp. 7151-7158  
 ISSN: 0021-9258

I-4 ANSWER 49 OF 63 MEDLINE  
 II Activation of hypoxia-inducible factor 1alpha: posttranscriptional regulation and conformational change by recruitment of the Arnt transcription factor  
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA. (1997 May 27) 94 (11) 5667-72  
 Journal code: PY3: 7505876 ISSN: 0027-8424

I-4 ANSWER 50 OF 63 MEDLINE  
 II Oxygen- and dioxin-regulated gene expression in mouse hepatoma cells  
 SO KIDNEY INTERNATIONAL. (1997 Feb) 51 (2) 567-74  
 Journal code: KVB: 0323470 ISSN: 0085-2538

I-4 ANSWER 51 OF 63 MEDLINE  
 II Hypoxia-inducible factor-1alpha is regulated at the post-mRNA level  
 SO Kidney International. (1997) Vol. 51, No. 2, pp. 560-563  
 ISSN: 0085-2538

I-4 ANSWER 52 OF 63 MEDLINE  
 II Structural and functional analysis of hypoxia-inducible factor 1  
 SO KIDNEY INTERNATIONAL. (1997 Feb) 51 (2) 553-5  
 Journal code: KVB: 0323470 ISSN: 0085-2538

I-4 ANSWER 53 OF 63 MEDLINE  
 II A cAMP response element and an Ets motif are involved in the transcriptional regulation of the tyrosine kinase **vascular endothelial growth factor** receptor 1 gene  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY. (1996 Nov 29) 271 (48) 30823-8  
 Journal code: HHV: 2985121R ISSN: 0021-9258

I-4 ANSWER 54 OF 63 MEDLINE  
 II Heterodimers of placenta growth factor **vascular endothelial growth factor**: Endothelial activity, tumor cell expression, and high affinity binding to IIK-1 KDR  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY. (1996 Feb 9) 271 (6) 3154-62  
 Journal code: HHV: 2985121R ISSN: 0021-9258

I-4 ANSWER 55 OF 63 MEDLINE  
 II Hypoxia-inducible factor 1 levels vary exponentially over a



physiologically relevant range of  $\text{Ca}^{2+}$  tension  
 SO AMERICAN JOURNAL OF PHYSIOLOGY 1996 Oct 271 (4 Pt 1):C1172-80  
 Journal code: J18 0470511 ISSN: 0002-9583

I-4 ANSWER 56 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
 It shows enhances **vascular endothelial growth factor (VEGF)** gene expression in human vascular smooth muscle cells  
 SO Circulation (1996) Vol. 94, No. 8 Pt 1, pp. 1595  
 Meeting Info: 69th Scientific Sessions of the American Heart Association  
 New Orleans, Louisiana, USA November 10-13, 1996  
 ISSN: 0009-7322

I-4 ANSWER 57 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
 It cloning and functional analysis of the promoter for KDR (tk-1, a receptor for **vascular endothelial growth factor**  
 SO Journal of Biological Chemistry (1995) Vol. 270, No. 39, pp. 24111-2318  
 ISSN: 0021-9258

I-4 ANSWER 58 OF 63 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
 It Melanoma cell lines express VEGF receptor KDR and respond to exogenously added VEGF  
 SO Biochemical and Biophysical Research Communications (1995) Vol. 217, No. 3, pp. 721-727  
 ISSN: 0006-291X

I-4 ANSWER 59 OF 63 CAPTUS COPYRIGHT 2002 ACS  
 It Hypoxic stimulation of **vascular endothelial growth factor** expression in vitro and in vivo  
 SO Lab Invest (1994) 71(3): 374-9  
 CODEN: LAMW ISSN: 0023-6837

I-4 ANSWER 60 OF 63 MEDLINE  
 It **Vascular endothelial growth factor** and its receptors  
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 1994 May 11 91(10):3556-61  
 Journal code: J68 8912757 ISSN: 0955-2235

I-4 ANSWER 61 OF 63 MEDLINE  
 It Hypoxia regulatory elements of the human **vascular endothelial growth factor** gene  
 SO CELLULAR AND MOLECULAR BIOLOGY 1994 Jun 11 35(5): 355-61  
 Journal code: J5N 9316986 ISSN: 0968-8773

I-4 ANSWER 62 OF 63 MEDLINE  
 It Significance of **vascular endothelial growth factor** vascular permeability factor for solid tumor growth, and its inhibition by the antibody  
 SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (1993 Aug 16) 194(3): 1244-41  
 Journal code: JY8 0372516 ISSN: 0006-291X

I-4 ANSWER 63 OF 63 CAPTUS COPYRIGHT 2002 ACS  
 It The binding of **vascular endothelial growth factor** to its receptors is dependent on cell surface-associated heparin-like molecules  
 SO J Biol Chem (1992) 267(9): 6093-8  
 CODEN: JBCHA3 ISSN: 0021-9258

File Info  
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 ENTRY: 53.87  
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SESSION WILL BE HELD FOR 60 MINUTES  
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 SESSION RESUMED IN FILE: MEDLINE, CAPTUS, BIOSIS AT 12:12:45 ON 20 MAY 2002  
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 TOTAL: 54.08

vegf(2a)receptor or (vascular endothelial growth factor(2a)receptor)  
 VEGF(2A)RECEPTOR IS NOT A RECOGNIZED COMMAND  
 The previous command name entered was not recognized by the system.  
 For a list of commands available to you in the current file, enter  
 "HELP COMMANDS" at an arrow prompt ( )

vegf(2a)receptor or (vascular endothelial growth factor(2a)receptor)  
 VEGF(2A)RECEPTOR OR (VASCULAR ENDOTHELIAL GROWTH FACTOR(2A) RECEPTOR)  
 FILE: MEDLINE, CAPTUS, BIOSIS ENTERED AT 12:04:20 ON 20 MAY 2002

FILE: BIOSIS ENTERED AT 12:04:20 ON 20 MAY 2002  
 FILE: MEDLINE, CAPTUS, BIOSIS ENTERED AT 12:04:28 ON 20 MAY 2002  
 11 9:336 SHELA

1 2 22928 SV6GEOR (VASCULAR ENDOTHELIAL GROWTH FACTOR)  
1 3 101511 AND12  
1 4 63 D1P REN1338 D1P IC VHS REMOVED  
1 5 5094 SV6GEOR (VASCULAR ENDOTHELIAL GROWTH  
1 ACTOR2 VBR)

Helps  
1 101511S NOT A RECORD/N/ID COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt ( )

Steps  
1 6 811015  
dup term lo  
PROCTSSING COMMAND FOR 16  
1 7 4 D1P REN164 D1P IC VHS REMOVED

dn so 1-4  
1 7 ANSWER1 OF 4 MEDLINE D1P IC VIT 1  
11 Wide spectrum of antitumor activity of a neutralizing monoclonal antibody  
to human vascular endothelial growth factor  
SO JAPANESE JOURNAL OF CANCER RESEARCH ARCH (1999 Jan) 90 (1) 3-100  
Journal code: JBXA 8509412 ISSN: 0910-5050

1 7 ANSWER2 OF 4 MEDLINE D1P IC VIT 2  
11 Nuclear protein interactions with the human KDR (K1) promoter in vivo.  
Regulation of Sp1 binding is associated with cell type-specific  
expression  
SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Mar 28) 272 (13) 8410-6  
Journal code: JHV 2985121R ISSN: 0021-9258

1 7 ANSWER3 OF 4 MEDLINE  
11 Vascular endothelial growth factor and its receptors  
SO PROGRESS IN GROWTH FACTOR RESEARCH (1994) 5 (1) 89-97 Ref: 61  
Journal code: AGS 8912757 ISSN: 0955-2235

1 7 ANSWER4 OF 4 CAPLUS COPYRIGHT 2002 ACS  
11 The binding of vascular endothelial growth factor to its receptors is  
dependent on cell surface-associated heparin-like molecules  
SO J Biol Chem (1992) 267(9) 6093-8  
CODEN: JBCHAA ISSN: 0021-9258

d dbb ab 2-4

1 7 ANSWER2 OF 4 MEDLINE D1P IC VIT 2  
ACCESSION NUMBER: 9726794 MEDLINE  
DOCT NUMBER: 9726794 PubMed ID: 9079666  
1111 Nuclear protein interactions with the human KDR (K1)  
promoter in vivo. Regulation of Sp1 binding is associated  
with cell type-specific expression

AUTHOR: Patterson C, Wu Y, Lee M P, DeVaulh J D, Kunge M S, Haber E  
CORPORATE SOURCE: Division of Cardiology, University of Texas Medical Branch,  
Galveston, Texas 77555-1064, U.S.A. camp@cardiology.utmb.edu  
CONTACT NUMBER: 4096771-02 (SIGMS)  
111 57664401 (NHBD)  
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Mar 28) 272 (13)  
8410-6  
Journal code: JHV 2985121R ISSN: 0021-9258

PUB COUNTRY: United States  
Journal: Article (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199705  
ENTRY DATE: Entered STN: 19970514  
Last Updated on STN: 20000303  
Entered Medline: 19970502

AB: The endothelial cell type-specific tyrosine kinase KDR (K1) is a  
receptor for vascular endothelial  
growth factor and a critical regulator of endothelial  
cell growth and development. To study mechanisms of endothelial cell  
differentiation and gene regulation, we have analyzed the topology of the  
proximal promoter of human KDR (K1). A protected sequence between base  
pairs -110 and -25 was defined by in vitro DNase I footprinting analysis  
in human umbilical vein endothelial cells (HUVECs). Purified Sp1 alone  
produced similar protection, and electrophoretic mobility shift assays  
demonstrated that Sp1 was indeed the major nuclear protein binding to this  
region. Despite the cell type specificity of KDR (K1) expression, no cell  
type differences were observed in DNase I-protein interactions in vitro. In  
contrast, in vivo footprinting assays demonstrated marked differences in  
core promoter interactions between cell types. Protection of Sp1 binding  
sites was observed in HUVECs by in vivo DNase I footprinting, whereas in  
human fibroblasts and HeLa cells a pattern consistent with  
nucleosomal positioning was observed. In vivo dimethylsulphate footprinting  
confirmed that DNase I-protein interactions occurred within Sp1 elements in  
HUVECs but not in nonendothelial cells. It is possible that distinct  
element, coordinate Sp1 binding and chromatin structure to regulate cell  
type-specific expression of KDR (K1).

1 7 ANSWER3 OF 4 MEDLINE  
ACCESSION NUMBER: 94257859 MEDLINE  
DOCT NUMBER: 94257859 PubMed ID: 7515291  
TITLE: Vascular endothelial growth factor and its receptors  
AUTHOR: Neufeld G, Tessier S, Ghan Goren H, Cohen T, Levi B,  
SO PROGRESS IN GROWTH FACTOR RESEARCH (1994) 5 (1) 89-97  
Ref: 61

Journal code: AGS 8912757 ISSN: 0955-2235  
PUB COUNTRY: ENGLAND (United Kingdom)  
Journal: Article (JOURNAL ARTICLE)  
General Review: (REVIEW)  
(REVIEW, JOURNAL)

LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199407  
ENTRY DATE: Entered STN: 19940714

**AB** Vascular endothelial growth factor (VEGF) is a highly specific mitogen for vascular endothelial cells and an angiogenic factor that is structurally related to platelet-derived growth factor (PDGF). It is also known as the vascular permeability factor (VPF) because it efficiently potentiates the permeabilization of blood vessels. Five types of VEGF mRNA encoding VEGF species which differ in their molecular mass and in their biological properties are transcribed from a single gene as a result of alternative splicing. VEGFs are produced and secreted by several normal cell types including smooth muscle, fetal and adrenal cortex cells. VEGFs are also produced by different tumorigenic cells, and appear to play a major role in tumour angiogenesis. Antibodies directed against VEGF can inhibit the growth of a variety of VEGF-producing tumours. Of the various VEGF species, the best characterized is the 165 amino acid long form (VEGF<sub>165</sub>). VEGF<sub>165</sub> is a heparin binding growth factor, and its interaction with VEGF receptors on the cell surface of vascular endothelial cells depends on the presence of heparin-like molecules.

Several cell types which do not proliferate in response to VEGF such as bovine corneal endothelial cells, HeLa cells, and human melanoma cells also express cell surface VEGF receptors, but the function of the VEGF receptors in these cells is unclear. Recently, the tyrosine-kinase receptors encoded by the flt and KDR/Flk-1 genes were found to function as VEGF<sub>165</sub> receptors.

17. ANSWER 4 OF 4 C.V.P.I.S. COPYRIGHT 2002 ACS  
ACCISSION NT MEER 1992 208557 C.V.P.I.S.  
DOCT ME NT NT MEER 116 208557  
11111 The binding of vascular endothelial growth factor to its receptors is dependent on cell surface-associated heparin-like molecules.

AT THORIS) Galay-Doreen, Hela, Soker, Shany, Vlodavsky, Israel, Neufeld, Gera

CORPORATE SOCIETY Dep Biol, Technion, Israel Inst Technol, Haifa, 42000, Israel

SOCIETY CODEN: JBCHEM (1992) 267(9): 6093-8

DOCT ME NT TYPI Journal

1 ANGL MO English

**AB** The effect of heparin upon the interaction of vascular endothelial growth factor (VEGF) with its receptors was studied. Heparin, at concentrations ranging from 0.1-10 µg/ml, strongly potentiated the binding of 125I-VEGF to its receptors on endothelial cells. Scatchard analysis of 125I-VEGF binding indicates that 1 µg/ml heparin induces an 8-fold increase in the apparent dissociation constant of VEGF binding sites for VEGF, but does not affect the dissociation constant of VEGF. Crosslinking experiments showed that heparin strongly potentiates the formation of the 170-, 195-, and 225-kDa 125I-VEGF-receptor complexes on endothelial cells. At high 125I-VEGF concentrations (4 µg/ml), heparin preferentially enhanced the formation of the 170- and 195-kDa complexes. Preincubation of the cells with heparin followed by extensive washes produced a similar enhancement of subsequent 125I-VEGF binding. The binding of 125I-VEGF was completely inhibited following digestion of endothelial cells with heparinase and could be restored by the addition of exogenous heparin to the digested cells. The

enhancing effect of heparin facilitated the detection of VEGF receptors on cell types that were not known previously to express such receptors. Evidently, cell surface-associated heparin-like molecules are required for the interaction of VEGF with its cell surface receptors.

18 1735 FLK-1

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E "FLK-1" CN 25

FL 1 FLNTHIDE CN

FL 2 FLZ PROTEIN (SALMONELLA ENTERICA) TYPIH STRAIN C118 G1 CN

FL 3 0 -- FLK-1 CN

FL 4 FLK-1 RECEPTOR TYROSINE KINASE CN

FL 5 FLK-1 RECEPTOR TYROSINE KINASE (BOS TAUROS) FRAGMENT CN

FL 6 FLK-1 KDR VEGF RECEPTOR TYROSINE KINASE CN

FL 7 FLK2 FLK3 RECEPTOR TYROSINE KINASE CN

FL 8 FLN1 CN

FL 9 FLN1 CN

FL 10 FLN1 5011 CN

FL 11 FLN-4205 CN

F12 1 H N-4608 CN  
 F13 1 H N2-4490 CN  
 F14 1 H N2-4405 CN  
 F15 1 H N4-4405 CN  
 F16 1 H N6-4405 CN  
 F17 1 H N6-4405 CN  
 F18 1 H N6-4408 CN  
 F19 1 H O1 CN  
 F20 1 H O1005 CN  
 F21 1 H O1010 CN  
 F22 1 H O1012 CN  
 F23 1 H O1020 CN  
 F24 1 H O1347 CN  
 F25 1 H O2 CN

#### S F4

F10 1 H T K-1 R1 C1 P10P TYROSINE KINASE CN

#### DIS1101 SQDB

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F10 ANSWER1 OF 1 REQUESTS. COPYRIGHT 2002 ACS

RN 1509772450 R1 G1 S1 RY

CN kinase (phosphotransferase), gene flk-1 protein (9CT) (CAINDEX.N.AMD)  
 OTHER NAMES

CN **flk-1 receptor tyrosine kinase**

CN flk-1 KDR VEGF receptor tyrosine kinase

CN Gene flk-1 receptor tyrosine kinase

CN Protein kinase flk-1

CN VEGF receptor tyrosine kinase 2

ME 1 unspecified

CT MAN

SR CA

FC Synthesis CA CAPTUS, CIN, TONCENTER, 1 SP, V12, 1 SP, V11, 11

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2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE C A

124 REFERENCES IN FILE CAPTUS (1967 TO DATE)

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CASH DISCOUNT PRICE

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F11 MEDLINE 1 NTRID AT 12 21 44 ON 20 MAY 2002

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FILE MEDLINE CAPTUS BIOSIS ENTERED AT 12 04 28 ON 20 MAY 2002

F11 97336 SHEL.A

F12 279288 VEGF OR VASCULAR ENDOTHELIAL GROWTH FACTOR

F13 701 S11 AND12

F14 63 DUP REA13 (38 Duplicates REMOVED)

F15 50948 VEGF2 RECEPTOR OR VASCULAR ENDOTHELIAL GROWTH  
 FACTOR (2 VIRE

F16 8 S14 (PL5

F17 4 DUP REA16 (4 Duplicates REMOVED)

F18 1785 S FLK-1

FILE REQUESTS ENTERED AT 12 19 48 ON 20 MAY 2002

F19 0 S FLK-1 CN

F10 1785 S FLK-1 CN 25

F10 1 S F4

FILE MEDLINE BIOSIS CAPTUS ENTERED AT 12 21 44 ON 20 MAY 2002

F11 1785 S FLK-1

s fl and11

F12 511 AND111

dup cen112

PROCEEDINGS COMPLETED FOR F12

F13 7 Duplicates REMOVED (2 Duplicates REMOVED)

d to so 17

F13 ANSWER1 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
 TT A single autophosphorylation site on KDR **Flk-1** is

essential for VEGF-A-dependent activation of PI-3-gamma and DNAX synthesis  
 in vascular endothelial cells.

SO F11 O (European Molecular Biology Organization) Journal. (June 1, 2001)  
 Vol 26, No 11, pp. 2768-2778, print.

ISSN: 0261-4189.

F13 ANSWER2 OF 7 MEDLINE

TT Flk-1-trans-activating (Tat) protein: both a target and a tool in  
 therapeutic approaches.

SO BIOCHEMICAL PHARMACOLOGICAL. (1999 Nov 15) 58 (10) 1521-8. Ref 89



ven endothelial cells reveals that PI 3K-VEGF heterodimers and VEGF165 homodimers, but not PI 3K129 homodimers, form complexes with membrane receptors. VEGF165 homodimers and PI 3K-VEGF heterodimers stimulate tyrosine phosphorylation of a 220-kDa protein, the expected size for the KDR receptor in human umbilical ven endothelial cells, whereas PI 3K129 homodimers are unable to induce tyrosine phosphorylation of this protein. These data indicate that PI 3K-VEGF may modulate VEGF-induced angiogenesis by the formation of PI 3K-VEGF heterodimers in cells producing both factors.

s heterologous or recombinant

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I 16 47 DEPREM I 15 627 DEPREM VITIS REMOVED

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I 16 ANSWER 1 OF 37 MEDLINE

IT Antitumor activity of cytotoxic T lymphocytes engineered to target vascular endothelial growth factor receptors.

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (2002 May 14;99(10):7009-14)

Journal code: 7505876 ISSN: 0027-8424

I 16 ANSWER 2 OF 37 MEDLINE

IT Angiogenic and angiophil responses to vascular endothelial growth factor administration in adult rat brain

SO NEUROSCIENCE (2002 11(1):4) 589-604

Journal code: 7605074 ISSN: 0306-4522

I 16 ANSWER 3 OF 37 MEDLINE

IT Controlled expression of Human Endothelial Cell Populations by Cre-loxP-based Reverse Transcriptional Transduction

SO HUMAN GENETICS (2002 Jun) 18 (2):321-34

Journal code: 9068950 ISSN: 1043-0342

I 16 ANSWER 4 OF 37 MEDLINE

IT Caveolin-1 null mice are viable but show evidence of hypoproliferative and vascular abnormalities

SO BIOLOGICAL JOURNAL OF THE ROYAL SOCIETY (2001 Oct 12;276(41):38121-38)

Journal code: 2985121E ISSN: 0021-9258

I 16 ANSWER 5 OF 37 MEDLINE

IT Increased vascular endothelial growth factor 165 binding to kinase insert domain-containing receptor after infection of human endothelial cells by recombinant adenovirus encoding the VEGF(165) gene

SO CIRCULATION (2001 Apr 10;103(14):1887-92)

Journal code: DAWV 0147763 ISSN: 1524-4539

I 16 ANSWER 6 OF 37 MEDLINE

IT Extracellular matrix protein 1 (ECM1) has angiogenic properties and is expressed by breast tumor cells

SO JOURNAL OF CELL PHYSIOLOGY (2001 Apr) 15(6):988-994

Journal code: EAS 8804484 ISSN: 0892-6638

I 16 ANSWER 7 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Encostatin inhibits mobilization of bone marrow-derived endothelial progenitor cells

SO Blood (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 823a

http://www.bloodjournal.org print

Meeting Info: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001

ISSN: 0006-4971

I 16 ANSWER 8 OF 37 MEDLINE

IT Vascular endothelial growth factor enhances glomerular capillary repair and accelerates resolution of experimentally induced glomerulonephritis

SO AMERICAN JOURNAL OF PATHOLOGY (2001 Aug) 159(2):599-608

Journal code: RRS 0370502 ISSN: 0002-9440

I 16 ANSWER 9 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Neuronal effects of VEGF

SO Society for Neuroscience Abstracts (2001) Vol. 27, No. 1, pp. 360 print

Meeting Info: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15, 2001

ISSN: 0905-2995

I 16 ANSWER 10 OF 37 MEDLINE

IT Expression of vascular endothelial growth factor in a human

hearing osseous cell line (ISO-HAS)

SO ARCHIVES OF DENTISTRY (2001 Jun) 29(6):296-301

Journal code: 8000462 ISSN: 0340-3696

I 16 ANSWER 11 OF 37 MEDLINE

IT Angiogenesis inhibitors in the treatment of lung cancer

SO LUNG CANCER (2001 Dec) 34 Suppl 3 S81-9

Journal code: 8800805 ISSN: 0169-5002

I 16 ANSWER 12 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Cloning, expression, purification and characterization of hemagglutinin, a factor capable of stimulating bone marrow hematopoietic stem cells and endothelial cells

SO Blood (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 71a

http://www.bloodjournal.org print

Meeting Info: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001

ISSN: 0006-4971

I 16 ANSWER 13 OF 37 MEDLINE

IT Activation of endothelial cell mitogen-activated protein kinase ERK1/2 by extracellular HIV-1 Tat protein

SO ENDOCELLULAR (2001) 8(1):65-74

Journal code: 9412500 ISSN: 1062-8329

I16 ANSWER 14 OF 37 MEDLINE DE PLICATE 8

T1 Vascular endothelial growth factor and interleukin-6 in pancreatic tumor-stromal cell interactions in multiple myeloma

SO JH 0910 (2000 Apr 15) 95 (8) 2630-6

Journal code: ABC 7603509 ISSN: 0006-4971

I16 ANSWER 15 OF 37 MEDLINE DE PLICATE 9

T1 Release and complex formation of soluble VEGF-1 from endothelial cells and biological fluids

SO J VBO R V O R Y N V S T I C A T I O N (2000 Apr 80 (4) 443-54

Journal code: K74 J376617 ISSN: 0023-6837

I16 ANSWER 16 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

T1 Regulation of hematopoiesis and vasculogenesis by Indian hedgehog and BMP-2 in the mouse embryo

SO Blood (November 16, 2000) Vol 96, No 11 Part 1, pp 72a, print

Meeting Info: 42nd Annual Meeting of the American Society of Hematology, San Francisco, California, 18-21 December 01-05, 2000. American Society of Hematology

ISSN: 0006-4971

I16 ANSWER 17 OF 37 MEDLINE DE PLICATE 10

T1 Roles of growth factors in mediating mesenchymal influence on the exfoliation of the Dunning prostatic adenocarcinoma

SO J1 M O T R B I O L O G Y (2000 Jan-Feb) 21 (1) 21-32

Journal code: J111 8409922 ISSN: 0289-5447

I16 ANSWER 18 OF 37 MEDLINE DE PLICATE 11

T1 HGF/SF-1, a protein tyrosine phosphatase that regulates vascular endothelial growth factor receptor-mediated signal transduction and biological activity

SO J O L R N A L O F B I O L O G I C A L C H E M I S T R Y (1999 Dec 31) 274 (5A) 8183-8

Journal code: JHV 2985121R ISSN: 0021-9238

I16 ANSWER 19 OF 37 MEDLINE DE PLICATE 12

T1 Vascular endothelial growth factor induces nephrogenesis and angiogenesis

SO J O L R N A L O F T H E A M E R I C A N S O C I E T Y O F N E P H R O L O G Y (1999 Oct) 10 (10) 2125-34

Journal code: AG 1 9013836 ISSN: 1046-6673

I16 ANSWER 20 OF 37 MEDLINE DE PLICATE 13

T1 Inhibition of hepatic stellate cell contraction during activation in vitro by vascular endothelial growth factor in association with upregulation of HGF tyrosine kinase receptor family, PL-1-1

SO B I O C H E M I C A L A N D B I O P H Y S I C A L R E S E A R C H C O M M U N I C A T I O N S (1999 May 19) 258 (3) 674-8

Journal code: 9Y 8 0372516 ISSN: 0006-291X

I16 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2002 ACS

T1 Tumor necrosis factor down-regulates vascular endothelial growth factor

receptor Ets-1 in vivo

SO Surgical Forum (1999) 50, 311-313

CODEN: STFOAN ISSN: 0071-8041

I16 ANSWER 22 OF 37 MEDLINE DE PLICATE 14

T1 Vascular endothelial growth factor chimeric toxin is highly active against endothelial cells

SO C A N C E R R E S E A R C H (1999 Jan 1) 59 (1) 183-8

Journal code: CNE 2984705R ISSN: 0008-5472

I16 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2002 ACS

T1 Regulatory sequences conferring expression of a heterologous sequence in endothelial cells for therapeutic applications in vascular disease

SO P C T Int Appl 107 pp

CODEN: PINXD2

I16 ANSWER 24 OF 37 MEDLINE DE PLICATE 15

T1 Patterns of brain angiogenesis after vascular endothelial growth factor administration in vitro and in vivo

SO P R O C E E D I N G S O F T H E N A T I O N A L A C A D E M Y O F S C I E N C E S O F T H E U N I T E D S T A T E S O F

AMERICA (1998 Jan 9) 95 (12) 7086-91

Journal code: PVS 7505876 ISSN: 0027-8424

I16 ANSWER 25 OF 37 MEDLINE DE PLICATE 16

T1 Role of vascular endothelial growth factor on erythropoietin-induced endothelial cell proliferation

SO J O L R N A L O F T H E A M E R I C A N S O C I E T Y O F N E P H R O L O G Y (1998 Nov) 9 (11) 1998-2004

Journal code: AG 1 9013836 ISSN: 1046-6673

I16 ANSWER 26 OF 37 MEDLINE DE PLICATE 17

T1 Inhibition of tumor growth by targeting tumor endothelium using a soluble vascular endothelial growth factor receptor

SO C E L L G R O W T H A N D D I F F E R E N T I A T I O N (1998 Jan) 9 (1) 49-58

Journal code: AYTE 9100024 ISSN: 1044-9523

I16 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2002 ACS

T1 Human protein tk-1bp cDNA sequence: **recombinant** binding by vascular endothelial cell surface receptor **tk-1**

SO P C T Int Appl 42 pp

CODEN: PINXD2

I16 ANSWER 28 OF 37 MEDLINE DE PLICATE 18

T1 Extracellular cleavage of the vascular endothelial growth factor 189-amino acid form by urkinase is required for its mitogenic effect

SO J O L R N A L O F B I O L O G I C A L C H E M I S T R Y (1997 May 19) 272 (29) 13390-6

Journal code: JHV 2985121R ISSN: 0021-9238

I16 ANSWER 29 OF 37 MEDLINE

T1 VEGF-145, a secreted vascular endothelial growth factor isoform that binds to extracellular matrix

SO J O L R N A L O F B I O L O G I C A L C H E M I S T R Y (1997 Mar 14) 272 (11) 7151-8

Journal code: HUY: 2985121R ISSN: 0021-9258

I16: ANSWER 36 OF 37 MEDLINE DT/PLICATE: 19

I1: Up-regulation of EGF-1 vascular endothelial growth factor receptor 2 by its ligand in a cerebral slice culture system

SO: CANCELR RISE: ARCEL (1997 Sep 15) 57 (17): 3852-9  
Journal code: CNE: 2984705R ISSN: 0008-5472

I16: ANSWER 31 OF 37 MEDLINE DT/PLICATE: 20

I1: Activation of EGF-1 KDR mediates angiogenesis but not by potentiation  
SO: CARDIOVASCULAR RISE: ARCEL (1997 Nov) 36 (2): 276-81  
Journal code: COR: 0077427 ISSN: 0008-6363

I16: ANSWER 32 OF 37 CAPLIS COPYRIGHT 2002 ACS

I1: Receptor protein tyrosine kinase extracellular domain preparation with recombinant cells and assays for receptors and ligands

SO: PCT Int. Appl.: 80 pp  
CODEN: PLNXD2

I16: ANSWER 33 OF 37 MEDLINE DT/PLICATE: 21

I1: Heterodimers of placenta growth factor vascular endothelial growth factor 1 endothelial activity, tumor cell expression, and high affinity binding to EGF-1 KDR

SO: JOI RN VI OF BIOLOGICAL CHEMISTRY (1996 Feb 9) 271 (6): 3155-62  
Journal code: HUY: 2985121R ISSN: 0021-9258

I16: ANSWER 34 OF 37 MEDLINE DT/PLICATE: 22

I1: Vascular endothelial growth factor-oxon conjugate specifically inhibits KDR EGF-1-positive endothelial cell proliferation in vitro and angiogenesis in vivo

SO: CANCELR RISE: ARCEL (1996 Mar 15) 56 (6): 1324-30  
Journal code: CNE: 2984705R ISSN: 0008-5472

I16: ANSWER 35 OF 37 MEDLINE DT/PLICATE: 23

I1: Mixed pro- and cell regulatory effects of vascular endothelial cell growth factor

SO: INTERNATIONAL JOI RN VI OF BIOLOGICAL CHEMISTRY (1995 Dec) 62 (4): 203-15  
Journal code: AVE: 9111627 ISSN: 0925-5710

I16: ANSWER 36 OF 37 CAPLIS COPYRIGHT 2002 ACS

I1: EGF-1 as receptor for vascular endothelial growth factor and compounds modulating their interaction

SO: PCT Int. Appl.: 98 pp  
CODEN: PLNXD2

I16: ANSWER 37 OF 37 MEDLINE DT/PLICATE: 24

I1: Placenta growth factor: Potentiation of vascular endothelial growth factor bioactivity, in vitro and in vivo, and high affinity binding to EGF-1 but not to EGF-1 KDR

SO: JOI RN VI OF BIOLOGICAL CHEMISTRY (1994 Oct 14) 269 (41): 256-65  
Journal code: HUY: 2985121R ISSN: 0021-9258

I16: ANSWER 36 OF 37 CAPLIS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994-549798 CAPLIS

DOCT MENT NUMBER: 121 149798

THI E: EGF-1 as receptor for vascular endothelial growth factor and compounds modulating their interaction

INVENTOR(S): Ulrich, Axel; Rissau, Werner; Mhlauer, Birgit  
PATENT ASSIGNEE(S): Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., Germany

SOURCE: PCT Int. Appl.: 98 pp  
CODEN: PLNXD2

DOCT MENT TYPE: Patent  
LANGUAGE: English  
FAMILY NO. INV. CO. NT: 7  
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 94/1499 A1 19940526 WO 1993-EP 03491 19931115  
W. M. JBG, HRR BY, C.A. CZ, E. H. H. JP, K. R. K. Z. L. V. NO. NZ, PL,  
RO, RU, SK, U.A. UZ

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, IT, MC, NL, PT, SE,  
FI, FI, CE, CG, CL, CN, GA, GN, MI, MR, NP, SN, TD, TG

CN 1094445 A 19941102 CN 1993-115445 19931113  
CA 2149298 A 19940526 CA 1993-2149298 19931115

AT 9-85627 A1 19940608 AT 1994-55627 19931115  
EP 669978 A1 19950906 EP 1994-900810 19931115

DE 41 381 411 A1 19940606 DE 41 381 411 A1 19940606  
JP 08505763 T2 19960625 JP 1993-511719 19931115

PROBITY APP. N. INFO: T.S. 1992-975750 A 19921113  
T.S. 1993-38506 A 19930326

WO 1993-EP 03491 W 19931115

AB: The present invention relates to the use of ligands for the EGF-1 receptor for the modulation of angiogenesis and vasculogenesis. The invention is based, in part, on the demonstration that EGF-1 tyrosine kinase receptor expression is associated with endothelial cells and the identification of vascular endothelial growth factor (VEGF) as the high affinity ligand of EGF-1. These results indicate a major role for EGF-1 in the signaling system during vasculogenesis and angiogenesis. Engineering of host cells that express EGF-1 and the uses of expressed EGF-1 to evaluate and screen for drugs and analogs of VEGF involved in EGF-1 modulation by either agonist or antagonist activities is described. The invention also relates to the use of EGF-1 ligands, including VEGF agonists and antagonists, in the treatment of disorders, including cancer, by modulating vasculogenesis and angiogenesis.

I16: ANSWER 33 OF 37 MEDLINE DT/PLICATE: 21

ACCESSION NUMBER: 96216393 MEDLINE  
DOCT MENT NUMBER: 96216393 PubMed ID: 8621715

THI E: Heterodimers of placenta growth factor vascular endothelial growth factor: Endothelial activity, tumor cell expression, and high affinity binding to EGF-1 KDR

AT 110R Cao Y, Chen H, Zhou L, Chiang M K, Anand-Apte B, Weatherbee J A, Wang Y, Tang F, Flanagan J G, Tsang M I



CORPORATE SOURCE: Department of Surgery, Harvard Medical School, Boston, Massachusetts 02115, USA  
CONTRACT NUMBER: 1997-440168 CAPLUS  
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY (1996 Feb 9; 271 (6) 3154-62)

Journal code: HVA 2985121R ISSN: 0021-9258  
PIB COUNTRY: United States

Journal Article (JOURN. ARTICLE)

LANG: WG: English

THESE: WG: Priority Journals

JENTRY MONTH: 199606

JENTRY DAY: Entered STN 19960627

Last Updated STN 20000303

Entered Medline 19960619

AB: Here we show that the Escherichia coli expressed monomers of placenta growth factor (PlGF)-129 and vascular endothelial growth factor (VEGF)-165 can be re-folded in vitro to form PlGF-VEGF heterodimers. The purified recombinant PlGF-VEGF heterodimers and VEGF homodimers have potent mitogenic and chemotactic effects on endothelial cells. However, PlGF-VEGF heterodimers display 20-50-fold less mitogenic activity than VEGF-165 homodimers. In contrast, PlGF-129 homodimers have little or no effect in these in vitro assays. We also demonstrate the presence of natural PlGF-VEGF heterodimers in the conditioned media of various human tumor cell lines. While PlGF-VEGF heterodimers bind with high affinity to a soluble Flk-1 KDR receptor, PlGF-129 homodimers fail to bind to this receptor. Cross-linking of 125I-ligands to human umbilical vein endothelial cells reveals that PlGF-VEGF heterodimers and VEGF-165 homodimers, but not PlGF-129 homodimers, form complexes with membrane receptors VEGFR-1 and VEGFR-2. These data indicate that PlGF-VEGF heterodimers stimulate tyrosine phosphorylation of a 220-kDa protein, the expected size for the KDR receptor in human umbilical vein endothelial cells, whereas PlGF-129 homodimers are unable to induce tyrosine phosphorylation of this protein. These data indicate that PlGF may modulate VEGF-induced angiogenesis by the formation of PlGF-VEGF heterodimers in cells producing both factors.

116 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997-440168 CAPLUS

DOCTHENT NUMBER: 12761234

1111 Human protein flk-1bp cDNA sequence;

recombinant production, and binding by

vascular endothelial cell surface receptor flk

-1

INVENTOR(S): Lymn, Stewart D

PATENT ASSIGNMENT: Immunex Corporation, USA

SOURCE: PCT Int. Appl. 42 pp

DOCTHENT NUMBER: PCT Int. Appl. 42 pp

LANG: WG: English

PATENT INFORMATION: PATENT INFORMATION

PATENT NO: KIND DATE APPLICATION NO DATE

WO 9717442 AT 19970515 WO 19961817584 19961105

WO 9717442 JP KR MX NO NZ  
RW AT BE CH DE DK ES FI FR GB GR IE IT IL MC NL PL SE  
AT 9711102 AT 19970529 AT 199711162 19961105  
PRIORITY APPN INFO: US 1995554374 19951108  
WO 19961817584 19961105

AB: A protein designated flk-1bp binds the vascular endothelial cell surface receptor Flk-1 (lateral liver kinase 1). The nucleotide sequence of isolated human cDNA encoding flk-1bp is provided, along with expression vectors and transformed host cells useful in producing flk-1bp polypeptides. Antibodies that are immunoreactive with flk-1bp are generated using the polypeptides disclosed herein. Flk-1bp competes with vascular endothelial growth factor for binding by flk-1 and flk-1bp mRNA is present in heart, liver, skeletal muscle, pancreas, and prostate gland.

dlus

(FILE HOMI) ENTERED AT 12:04:20 ON 20 MAY 2002

FILE: MEDLINE BIOSIS CAPLUS ENTERED AT 12:04:28 ON 20 MAY 2002  
11 9-336 SHEL-A  
12 22928 S VEGF OR (VASCUT. AR ENDOTHELIAL GROWTH FACTOR)  
13 01 S L1 AND L2  
14 63 DCP REML12 (2 DCP IC VIES REMOVED)  
15 5094 S VEGF (2 A) RICE PITOR OR (VASCUT. AR ENDOTHELIAL GROWTH FACTOR) (2 VIRE)  
16 8 S L1 (P) L5  
17 4 DCP REML16 (4 DCP IC VIES REMOVED)  
18 1785 S HEL-K-1

FILE: BIOSIS ENTERED AT 12:19:48 ON 20 MAY 2002

19 0 S HEL-K-1 CN  
E HEL-K-1 CN 25  
110 1 S E4

FILE: MEDLINE BIOSIS CAPLUS ENTERED AT 12:21:44 ON 20 MAY 2002  
111 1785 S HEL-K-1  
112 9 S L1 AND L11  
113 2 DCP REML12 (2 DCP IC VIES REMOVED)  
114 55573 S HETEROLOGOUS OR RECOMBINANT  
115 64 S L1 (S) L14  
116 37 DCP REML15 (27 DCP IC VIES REMOVED)

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ENTRY SESSION  
CASH/RESCUER PRICE -1.24 -1.86

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FILE ESTIMATEDCOST

DISCOUNT AMOUNTS FOR OFF-MEETING ACCORDINGS

CAS SUBSCRIBER PRICE

ENTRY SESSION

dhc

FILE TRONIP-ENTERED AT 12:04:20 ON 20 MAY 2002

FILE MEDLINE, CAPLIS, BIOSIS-ENTERED AT 12:04:28 ON 20 MAY 2002

1 933685HLA

12 229285 VI GFOR (VASCULAR ENDOTHELIAL GROWTH FACTOR)

13 101511 AND12

14 63 DEPRAL13 (8 DEPRICATIVES REMOVED)

15 50945 VI G12 (VASCULAR ENDOTHELIAL GROWTH

1 ACTOR)2 (VARE

16 85116PL5

17 4 DEPRAL16 (4 DEPRICATIVES REMOVED)

18 1785511K-1

FILE REGISTRAR-ENTERED AT 12:19:48 ON 20 MAY 2002

19 0545K-1 CN

110 1514

FILE MEDLINE, BIOSIS, CAPLIS-ENTERED AT 12:21:44 ON 20 MAY 2002

111 1785511K-1

112 9511 AND111

113 7 DEPRAL112 (2 DEPRICATIVES REMOVED)

114 5555735 III (ROLOGOIS OR RICO COMBINANT

115 6451116SL14

116 42 DEPRAL115 (27 DEPRICATIVES REMOVED)

s alk-1

117 1278 ELK-1

s111 and 117

118 4411 AND117

dup rem 118

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119 2 DEPRAL118 (2 DEPRICATIVES REMOVED)

116 1-2

119 ANSWER 1 OF 2 MEDLINE DEPRICATE 1

11 Vascular endothelial growth factor (VEGF) enhances the expression of receptors and activates mitogen-activated protein (MAP) kinase of dog retinal capillary endothelial cells.

119 ANSWER 2 OF 2 MEDLINE

11 ELK and ELK-2 in developing kidney and microvascular endothelial assembly

dhb ab 2

119 ANSWER 2 OF 2 MEDLINE

11 ACCESSION NUMBER 97097112 MEDLINE

11 DOCT VENT NIMBER 97097112 PubMed ID: 8941926

11 ELK and ELK-2 in developing kidney and microvascular endothelial assembly

11 AUTHOR Daniel T O, Stein E, Carretto D P, St John P L, Robert E,

11 Abrahamson D R

11 CORPORATE SOURCE: Division of Nephrology, Vanderbilt University Medical Center, Nashville, Tennessee, U.S.A.

11 CONTRACT NUMBER DK34972 (NIIDDK)

11 DK38517 (NIIDDK)

11 DK47078 (NIIDDK)

11 SOURCE: KIDNEY INTERNATIONAL SUPPLEMENT (1996 Dec) 57 S73-81

11 Journal code: KYC, 7508622 ISSN: 0098-6577

11 PUB. COUNTRY: United States

11 LANG. AGE: English

11 FILE SOURCE: Priority Journals

11 ENTRY MONTH: 199702

11 ENTRY DATE: Entered STN: 19970306

11 Last updated on STN: 20000303

11 Entered Medline: 19970225

AB Eph family receptor tyrosine kinases direct neuronal cell targeting, bundling and intercellular aggregation activity, yet their role in mammalian kidney development has been unexplored to date. We recently identified expression of ELK (Eph-like kinase) receptors in cultured human renal microvascular endothelial cells (HRMEC) and showed that ELK mediated their in vitro assembly into capillary-like structures in response to the exogenous ligand, ELK-2. Here we identify expression of the ELK ligand, ELK-2, in HRMEC and in primitive vascular structures of

developing murine kidney. E1K and LERK-2 are expressed on endothelial progenitor cells of primitive microvasculature in a pattern similar to that of the VEGF receptor. **Ab-1** E1K LERK-2 and

**Ab-1** antigens are also displayed on the branching collecting ducts, glomeruli and arterioles. To explore whether renal-derived endothelial cells may distinguish LERK-2 from the angiogenic LK ligand, LERK-1 (361), and whether endothelial cells from different sources may distinguish among Eph receptor ligands, we compared HRMHC and human umbilical vein endothelial cell (HUVEC) responses in an in vitro capillary-like assembly assay. HRMHC endothelial cells assembled capillary-like structures in response to LERK-2, but not LERK-1, under conditions that promoted HUVEC to assemble in response to LERK-1, but not LERK-2. Therefore, responses mediated through specific Eph family receptors (E1K and E2K) are discriminated by endothelial cells from different vascular bed sources. E1K and its ligand, LERK-2, are spatially and temporally coordinated in expression and may function in morphogenesis of the renal microvasculature.

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I 20 434 E1K1  
d dbb ab 1

I 20 ANSWER 1 OF 434 MEDLINE  
ACCESSION NUMBERS 2002274208 IN-PROCESS  
DOI: 10.1006/BBRC.2002.274208 Published ID: 12014653  
1111 E The retinoid-inducible gene 1 effect on apoptosis and  
M110R myogen-activated kinase signal pathways.  
Huang Shuang-Liang; Shyu Rong-Yann; Yeh Ming-Yang; Jiang  
Shun-Yuan

CORPORATE SOURCE: Graduate Institute of Life Sciences, National Defense  
Medical Center, Taipei, Taiwan.  
SOL RCI VETIC (VASCULAR RESEARCH) (2002 Mar-Apr) 22 (2 A) 709-804  
JOURNAL CODE 8102988 ISSN 0250-7005  
PUB CODE NTRY Greece  
JOURNAL ARTICLE (DOI: 10.1006/BBRC.2002.274208)  
LANG: ENG English  
FILE SOURCE: IN-PROCESS, NONINDEXED, Priority Journals  
ENTRY DATE ENTERED SIN 20020517  
Last updated on SIN 20020517

AB: HMGK1 (HMGK1) The retinoid-inducible gene 1 (RIG1), belonging to the family of type II tumor suppressor genes, was isolated from human gastric cancer cells treated with all-trans retinoic acid. The activity of the RIG1 gene was investigated in this study. MAFK (M110R) and M110R (M110R) and M110R (M110R) were transfected with expression vectors that contained RIG1-myc or RIG1-E1K1P fusion protein. Cell growth

was analyzed by measuring the incorporation of bromodeoxyuridine. Apoptosis was evaluated by the formation of in situ DNA breakage. The activities of myogen-activated kinase signal pathways were analyzed using signal pathway trans-reporting systems. RESULTS: Expression of the RIG1-myc fusion protein resulted in decreased cell growth. Both RIG1-E1K1P and RIG1-myc fusion proteins induced cellular apoptosis that was characterized by the presence of apoptotic bodies and in situ DNA breakage. The transactivation activities of E1K1, c-Jun and c-HaP protein were suppressed by 80, 50 and 88%, respectively, in HTA cells expressing the RIG1-myc fusion protein for two days. Similarly, the transactivation activities of the c-HaP protein was suppressed in TSC1/P201 and HTA cells transiently expressing RIG1-myc and RIG1-E1K1P, respectively. CONCLUSIONS: The RIG1 fusion proteins exhibited growth suppressive and apoptosis-inducing activity. The protein negatively regulated signal pathways of extracellular signal-regulated kinase, c-Jun N-terminal kinase and p38 myogen-activated kinase.

s maps of map kinase or myogen-activated protein kinase  
I 21 50978 MAPK OR MAP KINASE OR MITOGEN-ACTIVATED PROTEIN KINASE  
s H10121  
I 22 93111 (P) 121

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I 23 45101 P R E M 122 (48 DI) P I C V I T S R E M O V E D

s 123 and erb1  
I 24 1123 AND E1K

d b  
I 24 ANSWER 1 OF 1 MEDLINE  
TITLE: Vascular endothelial growth factor (VEGF) enhances the expression of  
receptors and activates myogen-activated protein (MAP) kinase of dog  
retinal capillary endothelial cells.

s 23 and 11  
I 25 0123 AND 11  
s 123 not in 2000  
I 26 34123 NOT IN 2000

d u so 1-34

I 26 ANSWER 1 OF 34 MEDLINE  
TITLE: Vascular endothelial growth factor (VEGF) enhances the expression of  
receptors and activates myogen-activated protein (MAP) kinase of dog  
retinal capillary endothelial cells  
SOL RCI VETIC (VASCULAR RESEARCH) (2000 Aug) 16 (4)  
383-91  
JOURNAL CODE CBR ISSN: 1080-7683

I 26. ANSWER 2 OF 34 MEDLINE  
 II De novo expression of vascular endothelial growth factor in human pancreatic cancer: evidence for an autocrine mitogenic loop  
 SO GASTROENTEROLOGY (2000 Nov) 119 (5) 1358-72  
 Journal code: EMB ISSN: 0016-5085

I 26. ANSWER 3 OF 34 MEDLINE  
 II VEGF-dependent signaling in retinal microvascular endothelial cells  
 SO THE JOURNAL OF CELL PHYSIOLOGY (1999 Dec) 45 (2) 77-91  
 Journal code: JCP ISSN: 0016-2900

I 26. ANSWER 4 OF 34 MEDLINE  
 II HGF/SF-1, a protein tyrosine phosphatase that regulates vascular endothelial growth factor receptor-mediated signal transduction and biological activity  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1999 Dec 31) 274 (53) 38183-8  
 Journal code: JBC ISSN: 0021-9258

I 26. ANSWER 5 OF 34 MEDLINE  
 II Concentration over-expression of vascular endothelial growth factor and its receptors in pancreatic cancer  
 SO INTERNATIONAL JOURNAL OF CANCER (2000 Jan 1) 85 (1) 27-34  
 Journal code: IJC ISSN: 0020-7176

I 26. ANSWER 6 OF 34 MEDLINE  
 II Vascular endothelial growth factor signals endothelial cell production of nitric oxide and prostacyclin through the eNOS/KDR activation of c-Src  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1999 Aug 27) 274 (35) 25130-5  
 Journal code: JBC ISSN: 0021-9258

I 26. ANSWER 7 OF 34 MEDLINE  
 II Vascular endothelial growth factor has neurotrophic activity and stimulates axonal outgrowth, enhancing cell survival and Schwann cell proliferation in the peripheral nervous system  
 SO JOURNAL OF NEUROSCIENCE (1999 Jul 15) 19 (14) 5731-40  
 Journal code: JNF ISSN: 1529-2401

I 26. ANSWER 8 OF 34 MEDLINE  
 II Vascular endothelial growth factor induces activation and subcellular translocation of focal adhesion kinase (p125<sup>FAK</sup>) in cultured rat cardiac myocytes  
 SO CIRCULATION RESEARCH (1999 May 28) 84 (10) 1194-202  
 Journal code: DAI 0047-103 ISSN: 0009-7330

I 26. ANSWER 9 OF 34 MEDLINE  
 II VEGF activates protein kinase C-dependent, but Ras-independent Raf-1/MEK/ERK1/2 pathway for DNA synthesis in primary endothelial cells  
 SO ONCOLOGY (1999 Apr 1) 18 (3) 2221-30  
 Journal code: 8711562 ISSN: 0950-9232

I 26. ANSWER 10 OF 34 MEDLINE  
 II 16k human protein inhibits vascular endothelial growth factor-induced activation of Ras in capillary endothelial cells

SO BIOLOGICAL RESEARCH (1999 May) 13 (5) 692-704  
 Journal code: NGZ 8801431 ISSN: 0888-8809

I 26. ANSWER 11 OF 34 MEDLINE  
 II The role of phosphatidylinositol 3-kinase in vascular endothelial growth factor's signaling  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1999 Apr 9) 274 (15) 10092-7  
 Journal code: JBC ISSN: 0021-9258

I 26. ANSWER 12 OF 34 MEDLINE  
 II Homologous up-regulation of KDR/Flk-1 receptor expression by vascular endothelial growth factor in vitro  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1998 Nov 6) 273 (45) 29970-85  
 Journal code: JBC ISSN: 0021-9258

I 26. ANSWER 13 OF 34 MEDLINE  
 II Ficosapentaenoic acid attenuates vascular endothelial growth factor-induced proliferation via inhibiting Flk-1 receptor expression in bovine carotid artery endothelial cells  
 SO JOURNAL OF CELLULAR PHYSIOLOGY (1998 Aug 17) 76 (2) 342-9  
 Journal code: JCB ISSN: 0022-0222

I 26. ANSWER 14 OF 34 MEDLINE  
 II Human immunodeficiency virus tat mediates the Flk-1/KDR receptor, mitogen-activated protein kinases, and components of focal adhesion in Kaposi's sarcoma cells  
 SO JOURNAL OF VIROLOGY (1998 Jul 72 (7) 6131-7  
 Journal code: JCV 0113724 ISSN: 0022-538X

I 26. ANSWER 15 OF 34 MEDLINE  
 II Vascular permeability factor stimulates vascular endothelial growth factor-mediated signaling in mouse mesenteric vascular endothelium  
 SO CIRCULATION RESEARCH (1998 Mar 15) 82 (3) 1278-84  
 Journal code: CNE 2984705R ISSN: 0008-5472

I 26. ANSWER 16 OF 34 MEDLINE  
 II Platelet-derived growth factor stimulates VEGF kinase and mitogenesis but not phospholipase C-gamma and migration of endothelial cells expressing Flt-1  
 SO ONCOLOGY (1998 Jan 22) 16 (3) 359-67  
 Journal code: ONC 8711562 ISSN: 0950-9232

I 26. ANSWER 17 OF 34 MEDLINE  
 II The vascular endothelial growth factor receptor KDR activates multiple signal transduction pathways in porcine aortic endothelial cells  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Dec 19) 272 (51) 32521-7  
 Journal code: JBC ISSN: 0021-9258

I 26. ANSWER 18 OF 34 MEDLINE  
 II The 280 kDa mature form of KDR/Flk-1 (VEGF receptor-2) activates the PI 3-gamma pathway and partially induces mitotic signals in NIH3T3 fibroblasts  
 SO ONCOLOGY (1997 May 1) 14 (7) 2070-89  
 Journal code: ONC 8711562 ISSN: 0950-9232

I-26 ANSWER 19 OF 34 MEHD INE

IT Increase of protein tyrosine phosphorylation in rat retina after ischemic-reperfusion injury

SO INVESTIGATIVE OPHTHALMOLOGY AND VISU-M SCIENCE (1996) 33(11) 2146-56

Journal code: GWT, 7704701 ISSN: 0146-0404

I-26 ANSWER 20 OF 34 MEHD INE

IT Activation of mitogen-activated protein kinases by vascular endothelial growth factor and basic fibroblast growth factor in capillary endothelial cells is inhibited by the antiangiogenic factor 1 $\alpha$ -KDa N-terminal fragment of placenta

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF

AMERICA (1995 Jul 3) 92(14) 6374-8

Journal code: PVS, 7505876 ISSN: 0027-8424

I-26 ANSWER 21 OF 34 MEHD INE

IT A unique signal transduction from E1 tyrosine kinase: a receptor for vascular endothelial growth factor VEGF

SO ONCOGENE (1995 Jan 5) 10(1) 135-47

Journal code: ONC, 8711562 ISSN: 0950-9232

I-26 ANSWER 22 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT The role of vascular endothelial growth factor (VEGF) in the pathophysiology of multiple myeloma (MM)

SO Blood (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 836a print

Meeting Info: 42nd Annual Meeting of the American Society of Hematology, San Francisco, California, USA December 01-05, 2000 American Society of Hematology

ISSN: 0006-4971

I-26 ANSWER 23 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT VEGF-R-1 (Flt-1) and VEGF-R-2 (KDR) stimulate the proliferation of VHL cells via the PI3-kinase and Akt/protein kinase-B (PKB) signal pathway

SO Blood (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 301a print

Meeting Info: 42nd Annual Meeting of the American Society of Hematology, San Francisco, California, USA December 01-05, 2000 American Society of Hematology

ISSN: 0006-4971

I-26 ANSWER 24 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT VEGF binding domains on fibronectin potentiate endothelial cell migration and differentiation by promoting the physical association of

VEGF-R-2 (KDR) with the integrin  $\alpha$ 5 $\beta$ 1

SO Blood (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 30a print

Meeting Info: 42nd Annual Meeting of the American Society of Hematology, San Francisco, California, USA December 01-05, 2000 American Society of Hematology

ISSN: 0006-4971

I-26 ANSWER 25 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT VEGF rescues hippocampal neurons from glutamate-induced toxicity through

ISSN: 0006-4971

Mit and ERK activation

SO Neuroscience Research Supplement (2000) No. 24, pp. S51, print

Meeting Info: 23rd Annual Meeting of the Japan Neuroscience Society and the 10th Annual Meeting of the Japanese Neural Network Society, Yokohama, Japan September 04-06, 2000

ISSN: 0921-8696

I-26 ANSWER 26 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT VEGF-induced endothelial cell PAF synthesis, migration and proliferation: Role of the PI3K pathway

SO Circulation (October 31, 2000) Vol. 102, No. 18 Supplement, pp. II-65 print

Meeting Info: Abstracts from Scientific Sessions 2000 New Orleans, Louisiana, USA November 12-15, 2000

ISSN: 0009-7332

I-26 ANSWER 27 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT The autophosphorylation of 1175-tyrosine residue on KDR Flt-1 (VEGF receptor-2) is essential for the activation of PI3-kinase and MAP kinase pathway for DNA synthesis in vascular endothelial cells

SO Journal of Submicroscopic Cytology and Pathology (July 2000) Vol. 32, No. 3, pp. 437, print

Meeting Info: 11th International Vascular Biology Meeting, Geneva, Switzerland September 05-09, 2000

ISSN: 1122-9497

I-26 ANSWER 28 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT VEGF-induced PAF synthesis by endothelial cells: Role of the PI3 kinase pathway

SO Canadian Journal of Cardiology (September, 2000) Vol. 16, No. Supplement 1, pp. 143E, print

Meeting Info: 53rd Annual Meeting of the Canadian Cardiovascular Society, Vancouver, British Columbia, Canada October 20-November 01, 2000 Canadian Cardiovascular Society

ISSN: 0828-282X

I-26 ANSWER 29 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Vascular endothelial growth factor (VEGF): axonal outgrowth and the expression of the VEGF Receptor Flt-1 in cultured peripheral ganglia

SO Society for Neuroscience Abstracts (1999) Vol. 25, No. 1-2, pp. 233

Meeting Info: 29th Annual Meeting of the Society for Neuroscience, Part 1, March Beach, Florida, USA October 23-28, 1999 The Society for Neuroscience

ISSN: 0190-5295

I-26 ANSWER 30 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT A new potential VEGF signaling pathway via phosphoinositide (PI) 3-kinase

SO Circulation (Oct 27, 1998) Vol. 98, No. 17 Pt 1, pp. 1327

Meeting Info: 71st Scientific Sessions of the American Heart Association, Dallas, Texas, USA November 8-11, 1998 The American Heart Association

ISSN: 0009-7332

I-26 ANSWER 31 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC

IT Vascular endothelial growth factor (VEGF) activates mitogen-

ISSN: 0009-7332

# **activated protein kinase (MAPK)**

pathways through phosphatidylinositol 3' (PI3) kinase in VEGFR-2  
**Flk-1** expressing hematopoietic cells

- 80 Blood (Nov 15, 1998) Vol 92, No 10 SUPPL 1: PAGE 1-2, pp 208A  
Meeting Info: 40th Annual Meeting of the American Society of Hematology  
Miami Beach, Florida, U.S.A. December 4-8, 1998 The American Society of  
Hematology  
ISSN 0006-4971

- 126 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2002 ACS  
11 Signal transduction of vascular endothelial growth factor (VEGF)  
receptors, Flk-1 and sDR Flk-1  
80 International Congress Series (1999), 1175(Tissue Engineering for  
Therapeutic Use 3), 25-33  
CODEN ENMDM4 ISSN 0531-5131

- 126 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2002 ACS  
11 8a3-Ono-4,5a-trihydroxy-3b-xantho-9a)-1-naphthoic acid inhibits MAPK  
phosphorylation in endothelial cells induced by VEGF and bFGF  
80 International Journal of Molecular Medicine (1998), 2(2), 211-215  
CODEN JNMHGG ISSN 1107-3756

- 126 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2002 ACS  
11 Tumor angiogenesis and fibrocyte kinase  
80 Tampubusthu Kakusan Koso (1997), 42(10), 1470-1476  
CODEN TAKKAF ISSN 0039-9450

dinh ab 32, 31, 21

- 126 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER 1999 162303 CAPLUS

- DOCT MENT NUMBER 1311 89567  
TTTT Signal transduction of vascular endothelial growth  
factor (VEGF) receptors, Flk-1 and KDR Flk-1  
At THORNS Shibuya, Masaharu, Takahashi, Tomoko, Sawano, Asoko,  
Hiratsuka, Sachie, Ogawa, Sachio, Yabuta, Naoyuki,  
Maru, Yoshino, Noda, Teisuo, Yamaguchi, Sachio  
CORPORATE SOURCE Department of Genetics, Institute of Medical Science,  
University of Tokyo, Tokyo 108-8639 Japan  
SOCIETY International Congress Series (1999), 1175(Tissue  
Engineering for Therapeutic Use 3), 25-33  
CODEN ENMDM4 ISSN 0531-5131

- PE BLSHR Elsevier Science B.V.

- DOCT MENT TYPE Journal, General Review  
LANGUAG English

- AB A review with 25 refs. including some of the authors' studies. VEGF has  
been shown to be crucial for the physiol. and most of the pathol.  
angiogenesis. To examine the signal transduction from the two VEGF  
receptors (VEGFR, Flk-1 and KDR Flk-1, the authors  
established NIH3T3 cell lines overexpressing each of the VEGFRs. The  
authors found that most of the mitotic signal was generated from KDR  
Flk-1. However, unlike other representative tyrosine  
kinase receptors, KDR Flk-1 utilizes the activation of

phospholipase-C, gamma-protein kinase C, pathway for the stimulation of  
MAP kinase and DNA synthesis, but not or only weakly the  
activation of Ras or PI3kinase pathway. The idea that most of the pos-  
signals towards endothelial cell proliferation and vascular permeability  
are mediated by KDR Flk-1 was confirmed by a novel  
type VEGF-like mol. (VEGF-E) which only binds and activates KDR  
Flk-1. Flk-1 was found to carry a stronger binding  
affinity to VEGF but a much weaker tyrosine kinase activity. Studies on  
the flk-1 tyrosine kinase-deficient mice suggest that the high-affinity  
ligand-binding domain of the flk-1 is sufficient for the establishment of  
physiol. angiogenesis, most likely regulating the levels of VEGF to an  
appropriate range in embryogenesis.

- REFERENCE CONTINUED 25 THRU ARE 25 CONTINUED FROM SOURCE AVAILABLE FOR  
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## RECORD AVAILABLE IN THE REF. FORMAT

- 126 ANSWER 31 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC  
ACCESSION NUMBER 1999-98673 BIOSIS  
DOCT MENT NUMBER PREV199900098673  
TTTT Vascular endothelial growth factor (VEGF) activates  
mitogen-activated protein  
kinase (MAPK) pathways through  
phosphatidylinositol 3' (PI3) kinase in VEGFR-2 Flk-1  
1 expressing hematopoietic cells  
Wang, J-F.; Gironman, J. E.  
CORPORATE SOURCE Div. Experimental Med. Beth Israel Deaconess Med. Center,  
Harvard Inst. Med., Boston, MA USA  
SOCIETY Blood (Nov 15, 1998) Vol 92, No 10 SUPPL 1: PAGE 1-2,  
pp 208A  
Meeting Info: 40th Annual Meeting of the American Society  
of Hematology Miami Beach, Florida, U.S.A. December 4-8, 1998  
The American Society of Hematology  
ISSN 0006-4971

- DOCT MENT TYPE Conference  
LANGUAG English

- 126 ANSWER 21 OF 34 MEDLINE  
ACCESSION NUMBER 95124709 MEDLINE  
DOCT MENT NUMBER 95124709 PubMedID 7824266  
TTTT A unique signal transduction from Flk-1 tyrosine kinase, a  
receptor for vascular endothelial growth factor VEGF,  
At THORNS Seelbaram, L., Gotlieb, N., Maru, Y., Newfield, G., Yamaguchi, S.,  
Shibuya, M.  
CORPORATE SOURCE Department of Genetics, University of Tokyo, Japan  
SOCIETY ONCOGENE (1995 Jan 5) 10(1) 135-47  
Journal code: ONCO 8711562 ISSN: 0950-9232  
PE BLSHR Journal, Article, (JOURN,AL,ARTICLE)  
LANGUAG English  
ENTRIES/MENT 199502  
ENTRY MONTH 19950223  
ENTRY DATE Entered STM: 19950223  
Last updated on STM: 20000303  
Entered Medline: 19950214

VEGFR-1 (class-like tyrosine kinase-1), a receptor-type tyrosine kinase of sharing similar features with two other fibroblast encoded proteins, KDR

**File-1** and **File-4**, has been recently identified as a receptor for Vascular Endothelial Growth Factor (VEGF) known to induce the proliferation of vascular endothelial cells. In this study, we demonstrate that **File-1** encodes for a 180 kDa glycoprotein, binds VEGF with high affinity, undergoes autophosphorylation but does not generate any mitogenic response in transfected NIH3T3 fibroblasts. Interestingly, the immediate early gene *c-myc* was not induced, whereas the *c-fos* was induced very weakly in **File-1** expressing NIH3T3 cells. A comparative analysis of the **File-1** signal cascade in the environment of endothelial cells with that of **File-1** expressing NIH3T3 cells showed that VEGF induced phosphorylation of PI 3 gamma and G-AP complex on tyrosine in both type of cells. However, a strong activation of **MAP kinases** was observed only in endothelial cells. Further, different from many other receptor tyrosine kinases, tyrosine phosphorylation of Shc protein, an important adaptor for signal transduction from many receptor kinases, was very weak in both **File-1**-NIH3T3 cells and endothelial cells. These results suggest that **File-1** kinase utilizes a unique signal transduction system in endothelial cells and the activation of the **File-1** kinase is insufficient to trigger a mitogenic response in NIH3T3 fibroblasts.

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1.27 1278 ELK-1

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1.28 5 PHOSPHORYLATION

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E2 1 PHOSPHORYLATION BI  
E3 1755 2 PHOSPHORYL BI  
E4 26 PHOSPHORYL BI  
E5 1 PHOSPHORYLATION BI  
E6 1 PHOSPHORYLATION BI  
E7 5 PHOSPHORYLASE BI  
E8 1 PHOSPHORYLATION BI  
E9 2 PHOSPHORYLATION BI  
E10 1 PHOSPHORYLATION BI  
E11 7 PHOSPHORYLATION BI  
E12 86 PHOSPHORYLATION BI

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1.29 3-1940 PHOSPHORYLATION

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1.30 585 1278 (S) 1.29

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FILE MEDICINE CAPTAS BIOSIS ENTERED AT 12 04 28 ON 20 MAY 2002  
1.1 9336 SHELIA  
1.2 22228 S VEGF OR (VASCULAR ENDOTHELIAL GROWTH FACTOR)  
1.3 101511 AND 12  
1.4 63 DCP REM13 (38 DCP LIGANDS REMOVED)  
1.5 504 S VEGF (2 DIRECTIONS) OR (VASCULAR ENDOTHELIAL GROWTH FACTOR) (2 DIRE)  
1.6 851 (D) 1.5  
1.7 4 DCP REM16 (4 DCP LIGANDS REMOVED)  
1.8 1785 S ELK-1

FILE BIOLOGY ENTERED AT 12 19 48 ON 20 MAY 2002  
1.9 9 S ELK-1 CN  
1.10 1 S ELK-1 CN 25





SO 1 MBO JOL RN M (1995 Dec 1) 14(23) 5957-64  
Journal code 8208664 ISSN: 0261-4189

I 33 ANSWER TO Q173 MEDLINE  
11 Protein synthesis inhibitors reveal differential regulation of  
**mitogen-activated protein kinase** and  
stress-activated protein kinase pathways that converge on Elk-1  
SO MOJL CCLAR AND CLELLAR BIOJ OXG (1995 Sep) 15 (9) 4930-8  
Journal code NGY 8109087 ISSN: 0270-7306

I 33 ANSWER TO Q173 MEDLINE  
11 Ras **MAP kinase**-dependent and -independent signaling  
pathways target distinct ternary complex factors  
SO GENIS AND DEVEL OPN N L (1994 Aug 1) 8(15) 1803-16  
Journal code ENY 8711660 ISSN: 0890-9369

I 33 ANSWER TO Q173 MEDLINE  
11 Involvement of growth factor receptors in the mammalian T<sub>H</sub>1 response  
SO CLELLAR (1994 Sep 23) 78 (6) 963-72  
Journal code CQ4 0413066 ISSN: 0092-8674

I 33 ANSWER TO Q173 MEDLINE  
11 The SRF accessory protein Elk-1 contains a growth factor-regulated  
transcriptional activation domain  
SO CLELLAR (1993 Apr 23) 73 (2) 381-93  
Journal code CQ4 0413066 ISSN: 0092-8674

d dbp ab 13

I 33 ANSWER TO Q173 MEDLINE  
ACCESSION NUMBERS 93238285 MEDLINE  
DOCT MINT NT MIER 93238285 PubMed ID 8386592  
1111 The SRF accessory protein Elk-1 contains a growth  
factor-regulated transcriptional activation domain

ATTHOR Matus R, Wyman J, Treisman R  
CORPORATE SOURCE Transcription Laboratory, Imperial Cancer Research Fund,  
London, England  
SOI RCT CLELLAR (1993 Apr 23) 73(2) 381-93  
Journal code CQ4 0413066 ISSN: 0092-8674  
PIB COI NTRY United States  
JANGI AG English  
JHE SUGMENT Priority Journals  
ENTRY MONTH 199305  
ENTRY DATE Entered STN 19930611  
Last updated on STN 19980206

AB The **Elk-1** and SRF transcription factors form a ternary  
complex at the *c-fos* serum response element (SRE). Growth factor  
stimulation rapidly induces a reversible change in the electrophoretic  
mobility of the ternary complex, accompanied by increased  
**phosphorylation** of the **Elk-1** C-terminal region  
and by the activation of a 42 kD cellular **Elk-1**

kinase. **Phosphorylation** of **Elk-1** in vitro by  
partially purified p42 **MAP kinase** induces a  
similar reduction in ternary complex mobility but has little effect on the  
efficiency of its formation. In vitro, **MAP kinase**  
**phosphorylates** the **Elk-1** C-terminal region at  
multiple sites, which are also **phosphorylated** following growth  
factor stimulation in vivo. The **Elk-1** C-terminal  
region functions as a regulated transcriptional activation domain whose  
activity in vivo is dependent on the integrity of the **MAP  
kinase** sites. These findings directly link transcriptional  
activation by the SRF to the growth factor-regulated  
**phosphorylation** of an SRF-binding protein.

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(C) L. BIONDI ENTERED AT 12:04:20 ON 20 MAY 2002

FILE MEDLINE, CAPLUS, BIOSIS ENTERED AT 12:04:28 ON 20 MAY 2002  
11 9,336 SHELIA  
12 2,292 S VEGF OR (VASCULAR ENDOTHELIAL GROWTH FACTOR)  
13 01 S L1 AND L2  
14 63 D P R E M L 1 3 (38 D P L I C A T E S R E M O V E D)  
15 509 4 S V E G F (2) R E C E P T O R O R (V A S C U L A R E N D O T H E L I A L G R O W T H  
F A C T O R ) (2) V I R E  
16 8 S L 1 (D L 5  
17 4 D P R E M L 1 6 (4 D P L I C A T E S R E M O V E D)  
18 1785 S ELK-1

FILE BIOLOGY ENTERED AT 12:19:48 ON 20 MAY 2002

19 0 S ELK-1 CN  
E 7 P L K 1 CN 25  
110 1 S E4

FILE MEDLINE, BIOSIS, CAPLUS ENTERED AT 12:21:44 ON 20 MAY 2002  
111 1785 S ELK-1  
112 9 S L 1 AND L 11  
113 7 D P R E M L 1 1 2 (2 D P L I C A T E S R E M O V E D)  
114 55557 S H E T F R O I O G O T S O R R E C O M B I N A N T  
115 64 S L 1 (S) 14  
116 37 D P R E M L 1 1 5 (27 D P L I C A T E S R E M O V E D)  
117 1278 S ELK-1  
118 4 S L 1 AND L 17  
119 2 D P R E M L 1 1 8 (2 D P L I C A T E S R E M O V E D)  
120 434 S ELK-1  
121 50978 S MAPK OR MAP KINASE OR MITOGEN ACTIVATED PROTEIN KINASE  
122 93 S L 1 (P L 21  
123 45 D P R E M L 1 2 2 (48 D P L I C A T E S R E M O V E D)  
124 1 S L 1 23 AND ELK  
125 0 S L 1 23 AND L 1  
126 44 S L 1 23 NOT PV 2000

FILE STINGLIDE ENTERED AT 13:07:32 ON 20 MAY 2002

HEADLINE BIOSIS CAPTUS ENTERED AT 18:09:41 ON 20 MAY 2002

127 1278 S H R-1  
128 5 S PHOSPHORYLATION  
129 4 PHOSPHORYL  
130 44940 S PHOSPHORYL AT  
131 585 S 12780129  
132 472 S 130 AND 121  
133 25 S 11 AND 131  
134 13 D P RE M 132 (12 D P) IC ATUS REMOVED

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and 1 SP VIT T L

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FILE MEDLINE ENTERED AT 11:40:19 ON 21 MAY 2002

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On April 23, 2001, MEDLINE was reloaded. See HELP RIOMAD for details

MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details

MEDLINE is now updated 4 times per week. A new current-awareness alert  
frequency (EVERYTPD VTD) is available. See HELP TPD VTD for more information

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MESH 2001 vocabulary. Enter HELP THESACTRS for details

THE OLD MEDLINE file segment now contains data from 1958 through 1965

Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the  
Basic Index. See HELP SETHIDS for details.

# THESE 111 CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION

## stat-2

- 532013 R.VI
- 1018959 R.VIS
- 1059499 R.VI
- (R.VI OR R.VIS)
- 2404149.2
- 4886 R.VI-2
- (R.VI.W.2)

## sveg

- 4933 VEGH
- 45 VEGHS
- 4948 VEGH
- (VEGF OR VEGHS)

## sH and I2

- 411 AND I2

## du so 1-4

- ANSWER 1 OF 4 MEDLINE

I1 The effect of vascular endothelial growth factor on a rat model of traumatic arteriovenous fistula dysfunction

SO JOURNAL OF VASCULAR MEDICAL BIOLOGY (2002 Feb) 16(2 Pt 1) 761-77

Journal code: 0376-6744 ISSN: 0022-5347

- ANSWER 2 OF 4 MEDLINE

I1 Vascular endothelial growth factor: tissue distribution and size of multiple mRNA splice forms in SHR and WKY

SO CLINICAL AND EXPERIMENTAL PHARMACOLOGY AND PHYSIOLOGY SUPPLEMENT (1995)

Journal code: 0376-6744 ISSN: 0143-9294

- ANSWER 3 OF 4 MEDLINE

I1 Vascular endothelial growth factor: tissue distribution and size of multiple mRNA splice forms in SHR and WKY

SO CLINICAL AND EXPERIMENTAL PHARMACOLOGY AND PHYSIOLOGY SUPPLEMENT (1995)

Journal code: 0376-6744 ISSN: 0143-9294

- ANSWER 4 OF 4 MEDLINE

I1 Biochemical characterization of two isoforms of Flk-1, a VEGF receptor-related tyrosine kinase

SO ONCOGENE (1998 Mar 2) 16(5) 973-84

Journal code: 0950-9612 ISSN: 0950-9612

- ANSWER 5 OF 12 MEDLINE

I1 Differential behavior of VEGF receptor expression and response to TNF- $\alpha$  in two immortalized human endothelial cell lines

SO INTERNATIONAL JOURNAL OF ONCOLOGY (2000 Sep) 17(3) 525-33

Journal code: 0378-5963 ISSN: 1019-6439

## sources

2180 HETC

## 922 HETC

- 2843 HETC
- (HETC OR HETC)

## sHk-1

- 648 H.K
- 25 H.KS
- 673 H.K
- (H.K OR H.KS)
- 27653331
- 484 H.K-1
- (H.K.W.1)

## sH4 and I5

- 1214 AND I5

## du so 1-12

- ANSWER 1 OF 12 MEDLINE

I1 Controlled Expansion of Human Endothelial Cell Populations by Gene-P-Based Reversible Immobilization

SO HUMAN GENE THERAPY (2002 Jan) 13(2) 321-34

Journal code: 9008950 ISSN: 1043-0342

- ANSWER 2 OF 12 MEDLINE

I1 Gene therapy-mediated expression by tumor cells of the angiogenesis inhibitor  $\alpha$ -1 results in inhibition of neuroblastoma growth in vivo

SO JOURNAL OF PEDIATRIC SURGERY (2001 Jan) 36(1) 30-6

Journal code: 00052631 ISSN: 0022-3468

- ANSWER 3 OF 12 MEDLINE

I1 The oncogenesis inhibitor  $\alpha$ -1 has long-lasting effects on vascular endothelial growth factor receptor phosphorylation and function

SO CLINICAL CANCER RESEARCH (2000 Dec) 6(12) 4848-58

Journal code: 0732-183X ISSN: 1078-0432

- ANSWER 4 OF 12 MEDLINE

I1 Characterization of (123)I-vascular endothelial growth factor-binding sites expressed on human tumor cells: possible implication for tumor scintigraphy

SO INTERNATIONAL JOURNAL OF CANCER (2001 Mar 15) 91(6) 789-96

Journal code: 0378-5963 ISSN: 0020-7136

- ANSWER 5 OF 12 MEDLINE

I1 Differential behavior of VEGF receptor expression and response to TNF- $\alpha$  in two immortalized human endothelial cell lines

SO INTERNATIONAL JOURNAL OF ONCOLOGY (2000 Sep) 17(3) 525-33

Journal code: 0378-5963 ISSN: 1019-6439

- ANSWER 6 OF 12 MEDLINE

I1 Lipocortin V may function as a signaling protein for vascular endothelial growth factor receptor-2 Flk-1

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (1999 May 19)

Journal code: 9Y8 0372516 ISSN: 0006-291X

16 ANSWER 7 OF 12 MEDLINE

11 Multiple differentiation pathways of rat mammary stromal cells in vitro as function of a fibroblast, adipocyte or endothelial phenotype is dependent on hormonal and extracellular matrix stimulation  
SO: DHEHRENATION (1999 Jan;64(2):91-101  
Journal code: 199 0401659 ISSN: 0401-4681

16 ANSWER 8 OF 12 MEDLINE

11 The role of phosphatidylinositol 3- $\alpha$  kinase in vascular endothelial growth factor signaling  
SO: JOIRNVI OF BIOCHEMICAL CELL BIOLOGY (1999 Apr 9);274(15):1602-5  
Journal code: HHV 2985121R ISSN: 0021-9258

16 ANSWER 9 OF 12 MEDLINE

11 Vascular endothelial growth factor induces VE-cadherin tyrosine phosphorylation in endothelial cells  
SO: JOIRNVI OF CELL SCIENCE (1998 Jul);111(Pt 13):1851-65  
Journal code: HNS 0052457 ISSN: 0021-9583

16 ANSWER 10 OF 12 MEDLINE

11 Inhibition of vascular endothelial growth factor (VEGF)-induced endothelial cell proliferation by a peptide corresponding to the exon 7-encoded domain of VEGF<sub>165</sub>  
SO: JOIRNVI OF BIOCHEMICAL CELL BIOLOGY (1997 Dec 12);272(50):582-8  
Journal code: HHV 2985121R ISSN: 0021-9258

16 ANSWER 11 OF 12 MEDLINE

11 Nuclear protein interactions with the human KDR **tk-1** promoter in vivo: Regulation of Sp1 binding is associated with cell type-specific expression  
SO: JOIRNVI OF BIOCHEMICAL CELL BIOLOGY (1997 Mar 28);272(13):8410-6  
Journal code: HHV 2985121R ISSN: 0021-9258

16 ANSWER 12 OF 12 MEDLINE

11 E1K and LERK-2 in developing kidney and microvascular endothelial assembly  
SO: KIDNEY INTERNATIONAL: SUPPLEMENT (1996 Dec);57:S73-81  
Journal code: KYC 7508622 ISSN: 0098-6577

d.abb ab 126

16 ANSWER 12 OF 12 MEDLINE

ACCESSION NUMBER: 97097112 MEDLINE  
DOCTUMENT NUMBER: 97097112 PubMed ID: 8941926  
TITLE: E1K and LERK-2 in developing kidney and microvascular endothelial assembly  
AUTHOR: Daniel T O. Stein E. Carcin D P. St John P L. Robert B. Abrahamson D R

CORPORATE SOURCE: Division of Nephrology, Vanderbilt University Medical

Center, Nashville, Tennessee, USA

CONTRACT NUMBER: DK34972 (NIDDK)

1638517 (NIDDK)

1634078 (NIDDK)

SO: PCT: KIDNEY INTERNATIONAL: SUPPLEMENT (1996 Dec);57:S73-81

Journal code: KYC 7508622 ISSN: 0098-6577

PUB. COUNTRY: United States

Journal: Article (JOIRNVI, ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199702

ENTRY DATE: Entered STN: 19970306

Last Updated on STN: 20000303

Entered Medline: 19970225

AB: Eph family tyrosine kinases direct neuronal cell targeting, branching, and intercellular aggregation activity. Yet their role in mammalian kidney development has been unexplored to date. We recently identified expression of E1K (Eph-like kinase) receptors in cultured human renal microvascular endothelial cells (HRMEC), and showed that E1K mediates their in vitro assembly into capillary-like structures in response to the exogenous ligand LERK-2. Here we identify expression of the E1K ligand, LERK-2, in HRMEC and in primitive vascular structures of developing murine kidney. E1K and LERK-2 are expressed on endothelial progenitor cells of primitive microvasculature in a pattern similar to that of the VEGF receptor, **tk-1**. E1K, LERK-2, and **tk-1** antigens are also displayed on the branching

intermediate epithelium. E1K and LERK-2 expression persists in mature collecting ducts, glomeruli and arterioles. To explore whether renal-derived endothelial cells may distinguish LERK-2 from the angiogenic E1K ligand, LERK-1 (tk1), and whether endothelial cells from different sources may distinguish among Eph receptor ligands, we compared HRMEC and human umbilical vein endothelial cell (HUVEC) responses in an in vitro capillary-like assembly assay. HRMEC endothelial cells assembled capillary-like structures in response to LERK-2, but not LERK-1, under conditions that promoted HUVEC to assemble in response to LERK-1 but not LERK-2. Therefore, responses mediated through Eph family receptors (E1K and E2K) are discriminated by endothelial cells from different vascular bed sources. E1K and its ligand LERK-2 are spatially and temporally coordinated in expression and may function in morphogenesis of the renal microvasculature.

16 ANSWER 6 OF 12 MEDLINE

ACCESSION NUMBER: 1999262163 MEDLINE

DOCTUMENT NUMBER: 99262163 PubMed ID: 10329451

TITLE: Lipocortin V may function as a signaling protein for vascular endothelial growth factor receptor-2 **tk**

16

AUTHOR: Wen Y, Edelman J L, Kang T, Sachs G

CORPORATE SOURCE: Membrane Biology Laboratory, Department of Medicine, West

Los Angeles VA Medical Center and UCLA, Los Angeles,

California, 90073, USA

CONTRACT NUMBER: DK41301 (NIDDK)

DK46917 (NIDDK)

DK54462 (NIDDK)



- liver-specific expression of serum amyloid A1 gene.  
 SO J01 RN XI OF JH01 06 GIC XI C I H: M I S T R Y. (2001 May 25) 276 (21) 17770-8  
 Journal code: H I V: 2985121R ISSN: 0021-9258
- I 9 ANSWER 6 OF 40 MEDLINE  
 II Cutting edge: activation of HIV-1 transcription by the NF- $\kappa$ B class II transactivator  
 SO J01 RN XI OF JN01 06 GIC XI C I H: M I S T R Y. (2000 Apr 15) 164 (8) 3941-5  
 Journal code: H I B: 2985117R ISSN: 0022-2767
- I 9 ANSWER 7 OF 40 MEDLINE  
 II Multisignal-induced apoptosis in Jurkat leukemia T cells by activating c-Jun N-terminal kinase  
 SO J01 RN XI OF C I 11 T A R B I O C I H: M I S T R Y. (2000 Mar) 77 (2) 333-44  
 Journal code: H I N E: 8205768 ISSN: 0730-2312
- I 9 ANSWER 8 OF 40 MEDLINE  
 II Selective inhibition of monoamine neurotransmitter transporters by synthetic local anesthetics  
 SO N XI N Y N: S C H I H: D E B E R G S: A R C H I V E S O F P H A R M A C O I O G Y. (2000 Feb) 361 (2) 214-20  
 Journal code: N I O: 0326264 ISSN: 0028-1298
- I 9 ANSWER 9 OF 40 MEDLINE  
 II Resistance to mitomycin C requires direct interaction between the Fanconi anemia proteins FANCA and FANCG in the nucleus through an arginine-rich domain  
 SO J01 RN XI OF H I O I 06 GIC XI C I H: M I S T R Y. (1999 Nov 26) 274 (48) 4212-8  
 Journal code: H I V: 2985121R ISSN: 0021-9258
- I 9 ANSWER 10 OF 40 MEDLINE  
 II Functional diversity of L-AP2alpha and L-AP2beta in postmitotic chromatin reorganization is caused by an alpha-specific nuclear targeting domain  
 SO J01 RN XI OF J099 Nov 15) 18 (22) 6370-84  
 Journal code: F M B: 8208664 ISSN: 0261-4189
- I 9 ANSWER 11 OF 40 MEDLINE  
 II Evaluation of novel human immunodeficiency virus type 1 Gag DNA vaccines for protein expression in mammalian cells and induction of immune responses  
 SO J01 RN XI OF V I R O I 06 GIC XI C I H: M I S T R Y. (1999 Nov) 73 (11) 9145-52  
 Journal code: K C V: 0113724 ISSN: 0022-538X
- I 9 ANSWER 12 OF 40 MEDLINE  
 II Cytoplasmic forms of human T-cell leukemia virus type 1 Tax induce NF-kappaB activation  
 SO J01 RN XI OF V I R O I 06 GIC XI C I H: M I S T R Y. (1998 Aug) 72 (8) 6777-84  
 Journal code: K C V: 0113724 ISSN: 0022-538X
- I 9 ANSWER 13 OF 40 MEDLINE  
 II Stable transfection of mammalian cells by syringe-mediated mechanical loading of DNA  
 SO A N XI Y I C XI B I O C I H: M I S T R Y. (1998 May 1) 258 (2) 216-22  
 Journal code: A N K: 0370535 ISSN: 0003-2697

- I 9 ANSWER 14 OF 40 MEDLINE  
 II Hepatitis C virus core protein binds to the cytoplasmic domain of tumor necrosis factor (TNF) receptor 1 and enhances TNF-induced apoptosis  
 SO J01 RN XI OF V I R O I 06 GIC XI C I H: M I S T R Y. (1998 Mar) 72 (5) 3691-7  
 Journal code: K C V: 0113724 ISSN: 0022-538X
- I 9 ANSWER 15 OF 40 MEDLINE  
 II Expression of Bcl-2 in human epithelial tumor (Hela) cells enhances clonogenic survival following exposure to 5-fluoro-2'-deoxyuridine or staurosporine, but not following exposure to etoposide or doxorubicin  
 SO C A N C E R C H E M O T H E R A P Y A N D P H A R M A C O I O G Y. (1998 Apr) 6) 457-63  
 Journal code: C98: 7806519 ISSN: 0344-5704
- I 9 ANSWER 16 OF 40 MEDLINE  
 II Visualization of agonist-induced sequestration and down-regulation of a green fluorescent protein-tagged beta2-adrenergic receptor  
 SO J01 RN XI OF H I O I 06 GIC XI C I H: M I S T R Y. (1998 Jan 2) 273 (1) 322-8  
 Journal code: H I V: 2985121R ISSN: 0021-9258
- I 9 ANSWER 17 OF 40 MEDLINE  
 II Serine protease inhibition and mitochondrial dysfunction associated with cisplatin resistance in human tumor cell lines: targets for therapy  
 SO B I O C H E M I C XI P H A R M A C O I O G Y. (1997 Jun 1) 53 (11) 1673-82  
 Journal code: 974: 0101032 ISSN: 0006-2952
- I 9 ANSWER 18 OF 40 MEDLINE  
 II Beta interferon and oncostatin M activate Raf-1 and mitogen-activated protein kinase through a FAK1-dependent pathway  
 SO M I O I C T A R A N D C E I I T A R B I O I O G Y. (1997 Jul) 17 (7) 8833-40  
 Journal code: N G Y: 8109087 ISSN: 0270-7306
- I 9 ANSWER 19 OF 40 MEDLINE  
 II Porcine alpha1,3-galactosyltransferase: tissue-specific and regulated expression of splicing isoforms  
 SO B I O C H E M I C A E T B I O P H Y S I C A A C T A. (1997 Mar) 27) 1356 (1) 1-11  
 Journal code: A0W: 0217513 ISSN: 0006-3002
- I 9 ANSWER 20 OF 40 MEDLINE  
 II Compartmentation of and interference with Sindbis virus replication by full-length and deleted forms of the nonstructural protein nsP1 expressed in stable transfectants of Hela cells  
 SO V I R O I O G Y. (1997 Jun 20) 227 (2) 361-9  
 Journal code: N E V: 0110674 ISSN: 0042-6822
- I 9 ANSWER 21 OF 40 MEDLINE  
 II Infection of an adenovirus 14-7-kilodalton protein inhibition of tumor necrosis factor alpha cytotoxicity with a new member of the G1Pase superfamily of signal transducers  
 SO J01 RN XI OF V I R O I 06 GIC XI C I H: M I S T R Y. (1997 Feb) 71 (2) 1576-82  
 Journal code: K C V: 0113724 ISSN: 0022-538X
- I 9 ANSWER 22 OF 40 MEDLINE  
 II Differential transactivation of the intercellular adhesion molecule 1 gene

promoter by Pax1 and Tbx2 of human T-cell leukemia viruses  
SO JOE RN VI OF VIRIOLOGY (1996 Dec) 70(12) 8508-17  
Journal code: KCV: 0113724 ISSN: 0022-538X

I-9 ANSWER 23 OF 40 MHDLNE  
II Hcl-2 prevents CD95 (Fas, Apo-1)-induced degradation of lamin B and poly(ADP-ribose) polymerase and restores the NF-kappaB signaling pathway  
SO JOE RN VI OF BIOLOGY (1996 Nov 29) 271(48) 6354-9  
Journal code: HIV: 2985121R ISSN: 0021-9258

I-9 ANSWER 24 OF 40 MHDLNE  
II Regulated **stable expression** and nuclear presence of retrovirus double-stranded RNA-binding protein sigma3 in **Hcl a** cells  
SO JOE RN VI OF VIRIOLOGY (1996 Jun) 70(6) 3497-501  
Journal code: KCV: 0113724 ISSN: 0022-538X

I-9 ANSWER 25 OF 40 MHDLNE  
II Induced mitotic death of Hcl a cells by abnormal expression of c-Ha-ras  
SO METATION RESEARCH (1996 Feb 1) 349(2) 173-82  
Journal code: 0400763 ISSN: 0027-5107

I-9 ANSWER 26 OF 40 MHDLNE  
II Hepatitis B virus pX activates NF-kappa B-dependent transcription through a Raf-independent pathway  
SO JOE RN VI OF VIRIOLOGY (1996 Jun) 70(1) 641-6  
Journal code: KCV: 0113724 ISSN: 0022-538X

I-9 ANSWER 27 OF 40 MHDLNE  
II Mapping the distribution of Golgi enzymes involved in the construction of complex oligosaccharides  
SO JOE RN VI OF CELL SCIENCE (1995 Apr) 108( Pt 4) 1617-27  
Journal code: HNK: 0052457 ISSN: 0021-9383

I-9 ANSWER 28 OF 40 MHDLNE  
II Transcriptional activation of human leukostatin (CD43) gene by Sp1 through binding to a GGCGTGG motif  
SO JETROPYAN JOE RN VI OF BIOCHEMISTRY (1994 Jul 15) 223(2) 19-27  
Journal code: FMI: 0107600 ISSN: 0014-2956

I-9 ANSWER 29 OF 40 MHDLNE  
II Kin recognition between medial Golgi enzymes in Hcl a cells  
SO JETROPYAN JOE RN VI (1994 Feb 1) 3(3) 562-74  
Journal code: FMI: 8208664 ISSN: 0261-4189

I-9 ANSWER 30 OF 40 MHDLNE  
II **Stable expression** of functional human cytomegalovirus immediate-early proteins IE1 and IE2 in **Hcl a** cells  
SO INTERVIROLOGY (1992) 34(2) 94-104  
Journal code: GW7: 0364265 ISSN: 0300-5526

I-9 ANSWER 31 OF 40 MHDLNE  
II A high-level expression vector for human cells  
SO GENETICS (1992 Oct 21) 120(2) 287-9

Journal code: FOP: 7706761 ISSN: 0378-1119

I-9 ANSWER 32 OF 40 MHDLNE  
II Stable overexpression of human beta 2-adrenergic receptors in mammalian cells  
SO NATURE SCIENCE (1992) 345(6044) 444-51  
Journal code: NTQ: 0326264 ISSN: 0028-1298

I-9 ANSWER 33 OF 40 MHDLNE  
II Expression of a cloned gamma-aminobutyric acid transporter in mammalian cells  
SO BIOCHEMISTRY (1992 Feb 25) 31(7) 1974-9  
Journal code: MOG: 0370623 ISSN: 0006-2960

I-9 ANSWER 34 OF 40 MHDLNE  
II The alpha 1C-adrenergic receptor: characterization of signal transduction pathways and mammalian tissue heterogeneity  
SO MOLECULAR PHARMACOLOGY (1991 Nov) 40(5) 19-26  
Journal code: NGR: 0035623 ISSN: 0026-895X

I-9 ANSWER 35 OF 40 MHDLNE  
II **Stable expression** of the human estrogen receptor in **Hcl a** cells by infection: effect of estrogen on cell proliferation and c-myc expression  
SO MOLECULAR AND CELLULAR ENDOCRINOLOGY (1991 Jun) 78(1-2) 61-9  
Journal code: F69: 7500844 ISSN: 0303-7207

I-9 ANSWER 36 OF 40 MHDLNE  
II **Stable expression** of human tissue-type plasminogen activator regulated by beta-actin promoter in three human cell lines **Hcl a**, WI-38 VA13 and KMS-5  
SO BIOCHEMICAL BIOPHYSICS ACTA (1991 Oct 8) 1090(2) 210-22  
Journal code: AOW: 0217513 ISSN: 0006-3002

I-9 ANSWER 37 OF 40 MHDLNE  
II Cell type-specific expression of the human transferrin gene. Role of promoter, negative, and enhancer elements  
SO JOE RN VI OF BIOLOGY (1989 May 5) 264(13) 7153-60  
Journal code: HIV: 2985121R ISSN: 0021-9258

I-9 ANSWER 38 OF 40 MHDLNE  
II Adeno-associated virus vector for high-frequency integration, expression, and rescue of genes in mammalian cells  
SO MOLECULAR AND CELLULAR BIOLOGY (1985 Nov) 5(11) 3251-60  
Journal code: NGY: 8109087 ISSN: 0270-7306

I-9 ANSWER 39 OF 40 MHDLNE  
II Plasmid phage- and genomic DNA-mediated transfer and expression of prokaryotic and eukaryotic genes in cultured human cells  
SO CYTOGENETICS AND CELL GENETICS (1984) 38(3) 227-34  
Journal code: DXK: 0367735 ISSN: 0301-0171

I-9 ANSWER 40 OF 40 MHDLNE

11 The III-V-dependent expression of testis-organizing H-Y antigen by human male cells  
 SO C111.1 (1978 Mar;13(3):509-13)  
 Journal code: CQ4:0414066 ISSN:0092-8674

receptor  
 487918 RECEPTOR  
 44478 RECEPTORS  
 110 554812 RECEPTOR  
 (RECEPTOR OR RECEPTORS)

s19 and 110  
 111 6119 AND 110  
 d h so 1-10

111 ANSWER 1 OF 6 MEDLINE  
 11 The human cytomegalovirus (828) protein is located in endocytic vesicles and undergoes constitutive endocytosis and recycling.  
 SO MOLECULAR BIOLOGY OF THE CELL (2001 Jun) 12 (6):1747-49  
 Journal code: BM:19201890 ISSN:1059-1524

111 ANSWER 2 OF 6 MEDLINE  
 11 Hepatitis C virus core protein binds to the cytoplasmic domain of tumor necrosis factor (TNF) receptor 1 and enhances TNF-induced apoptosis.  
 SO JOURNAL OF VIROLOGY (1998 May) 72 (5):3691-7.  
 Journal code: KCV:0111724 ISSN:0022-538X

111 ANSWER 3 OF 6 MEDLINE  
 11 Visualization of agonist-induced sequestration and down-regulation of a green fluorescent protein-tagged beta2-adrenergic receptor.  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1998 Jun 2) 273 (1):327-8  
 Journal code: HX:2985121R ISSN:0021-9258

111 ANSWER 4 OF 6 MEDLINE  
 11 Stable overexpression of human beta2-adrenergic receptors in mammalian cells.  
 SO NATIONWIDE JOURNAL OF PHARMACOLOGICAL SCIENCES OF THE AMERICAN SOCIETY OF PHARMACOLOGISTS (1992 Apr) 345 (4):44-51  
 Journal code: NIO:0326264 ISSN:0028-1298

111 ANSWER 5 OF 6 MEDLINE  
 11 The alpha1C-adrenergic receptor: characterization of signal transduction pathways and mammalian tissue heterogeneity.  
 SO MOLECULAR PHARMACOLOGY (1991 Nov) 40 (5):619-26  
 Journal code: NGR:0035623 ISSN:0026-895X

111 ANSWER 6 OF 6 MEDLINE  
 11 Stable expression of the human estrogen receptor in HeLa cells by infection: effect of estrogen on cell proliferation and c-myc expression  
 SO MOLECULAR AND CELLULAR ENDOCRINOLOGY (1991 Mar) 78 (1-2):61-69

Journal code: F69:7500844 ISSN:0303-7207

s1k-1  
 648 ELK  
 25 ELKS  
 673 ELK  
 (ELK OR ELKS)  
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 112 484 ELK-1  
 (ELK(W))

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(FILE FLOXIE ENTERED AT 11:40:12 ON 21 MAY 2002)

FILE MEDLINE ENTERED AT 11:40:19 ON 21 MAY 2002

11 3885 SRAT-2  
 12 4938 SVEGF  
 13 4811 AND 12  
 14 7843 SHVEG  
 15 4848 ELK-1  
 16 12814 AND 15  
 17 36423 SH1A  
 18 1378 STABLE EXPRESSION?  
 19 46817(S)8  
 110 554812 S RECEPTOR  
 111 6819 AND 110  
 112 4848 ELK-1

s17 and 112  
 113 5117 AND 112

d h so 1-5

113 ANSWER 1 OF 5 MEDLINE  
 11 HIF-1-transactivating (Hut) protein: both a target and a tool in therapeutic approaches.  
 SO BIOCHEMICAL PHARMACOLOGY (1999 Nov 15) 58 (10):1521-8 Ref: 89  
 Journal code: 9/4:0101032 ISSN:0006-2952

113 ANSWER 2 OF 5 MEDLINE  
 11 Differential transcriptional regulation of the two vascular endothelial growth factor receptor genes, Flk-1, but not Flk-1.  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Sep 19) 272 (38):23659-67  
 Journal code: HX:2985121R ISSN:0021-9258

113 ANSWER 3 OF 5 MEDLINE  
 11 Nuclear protein interactions with the human KDR Flk-1 promoter in vivo: Regulation of Sp1 binding is associated with cell type-specific expression  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Mar 28) 272 (3):8410-6  
 Journal code: HX:2985121R ISSN:0021-9258



113 ANSWER 4 OF 5 MEDLINE

11 Heterodimers of placenta growth factor vascular endothelial growth factor  
endothelial activity, tumor cell expression, and high affinity binding to

**Flk-1 KDR**

SO JOURNAL OF BIOLOGICAL CHEMISTRY (1996 Feb 9) 271 (6) 4154-62

Journal code: JBC, 2985121R ISSN: 0021-9258

113 ANSWER 5 OF 5 MEDLINE

11 Vascular endothelial growth factor and its receptors

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES (1994) 91 (1) 89-97 Ref: 61  
Journal code: PNAS, 8912757 ISSN: 0955-2235

doi: 10.45

113 ANSWER 4 OF 5 MEDLINE

ACCESSION NUMBER: 96216393 MEDLINE

DOCUMENT NUMBER: 96216393 PubMed ID: 8621715

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Heterodimers of placenta growth factor vascular endothelial  
growth factor endothelial activity, tumor cell expression,

and high affinity binding to **Flk-1 KDR**

ATTOR

Guo Y, Chen H, Zhou L, Chang M K, Amund-Bye B, Weinreb

Corporation, SORCE, Department of Surgery, Harvard Medical School, Boston

Massachusetts 02115, USA

CONTRACT NUMBER: P01-CA45548 (NCI)

SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY (1996 Feb 9) 271 (6)

4154-62

Journal code: JBC, 2985121R ISSN: 0021-9258

PIB CODE: NTRY

Journal Article (JOURNAL ARTICLE)

1 ANGEL AG

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KDR receptor in human umbilical vein endothelial cells, whereas PI GF129  
homodimers are unable to induce tyrosine phosphorylation of this protein.  
These data indicate that PI GF may modulate VEGF-induced angiogenesis by  
the formation of PI GF-VEGF heterodimers in cells producing both factors

113 ANSWER 5 OF 5 MEDLINE

ACCESSION NUMBER: 94257859 MEDLINE

DOCUMENT NUMBER: 94257859 PubMed ID: 7515293

TITLE: Vascular endothelial growth factor and its receptors

ATTOR: Neufeld G, Tessler S, Gilly-Goren H, Cohen T, Levy B Z

SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES (1994) 91 (1) 89-97

Ref: 61

Journal code: PNAS, 8912757 ISSN: 0955-2235

PIB CODE: NTRY

Journal Article (JOURNAL ARTICLE)

General Review (REVIEW)

REVIEW (TUTORIAL)

1 ANGEL AG

FILE SEGMENT: English

ENTRY MONTH: 199407

ENTRY DATE: Entered SIN: 19940714

Last updated on SIN: 20000303

Entered Medicine: 19940707

AB: Vascular endothelial growth factor (VEGF) is a highly specific mitogen for

vascular endothelial cells and an angiogenic factor that is structurally

related to platelet-derived growth factor (PDGF). It is also known as the

vascular permeability factor (VPF) because it efficiently potentiates the

permeabilization of blood vessels. Five types of VEGF mRNA encoding VEGF

species which differ in their molecular mass and in their biological

properties are transcribed from a single gene as a result of alternative

splicing. VEGFs are produced and secreted by several normal cell types

including smooth muscle, fetal and adrenal cortex cells. VEGFs are also

produced by different tumorigenic cells, and appear to play a major role

in tumour angiogenesis. Antibodies directed against VEGF can inhibit the

growth of a variety of VEGF-producing tumours. Of the various VEGF

species, the best characterized is the 165 amino acid long form (VEGF<sub>165</sub>).

VEGF<sub>165</sub> is a heparin-binding growth factor, and its interaction with VEGF

receptors on the cell surface of vascular endothelial cells depends on the

presence of heparin-like molecules. Several cell types which do not

proliferate in response to VEGF, such as bovine corneal endothelial cells,

HeLa cells and human melanoma cells also express cell surface VEGF

receptors, but the function of the VEGF receptors in these cells is

unclear. Recently, the tyrosine-kinase receptors encoded by the **Flk-1** and

**KDR** **Flk-1** genes were found to function as VEGF<sub>165</sub>

receptors.

Is heterolog? or recombinant

108-01 HETEROLOG?

105-67 RECOMBINANT

~906 RECOMBINANTS

103147 RECOMBINANT

(RECOMBINANT OR RECOMBINANTS)

114 227848 HETEROLOG? OR RECOMBINANT

# s 016-1

648 F1 R  
 2511 KS

673 F1 R  
 41 R OR F1 KS)

2768553.1  
 48311 K-1  
 41 R W 11)

# s 016-15

116 2811483115

d 0 s 0 1-28

116 ANSWER 1 OF 28 MEDLINE

TT Antitumor activity of cytotoxic T lymphocytes engineered to target  
 vascular endothelial growth factor receptors

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED  
 STATES OF

AMERICA (2002 May 14) 99 (10) 7609-14  
 Journal code: 7505876 ISSN: 0027-8424

116 ANSWER 2 OF 28 MEDLINE

TT Angiogenic and astroglial responses to vascular endothelial growth factor  
 administration in adult rat brain

SO NEUROSCIENCE (2002) 110 (4) 589-604  
 Journal code: 7605074 ISSN: 0304-4522

116 ANSWER 3 OF 28 MEDLINE

TT Controlled expression of Human Endothelial Cell Populations by  
 Cre-loxP-based Reverse Transfection

SO HUMAN GENE THERAPY (2002 Jan) 13 (2) 321-34  
 Journal code: 9008950 ISSN: 1043-0342

116 ANSWER 4 OF 28 MEDLINE

TT Expression of vascular endothelial growth factor in a human  
 hemangiosarcoma cell line (HSO-H.S)

SO ARCHIVES OF BIOCHEMICAL BIOPHYSICS (2001 Jun) 293 (6) 796-101  
 Journal code: 8000462 ISSN: 0304-3996

116 ANSWER 5 OF 28 MEDLINE

TT Activation of endothelial cell mitogen activated protein kinase (ERK1/2)  
 by extracellular HIV-1 Tat protein

SO JOURNAL OF CELL PHYSIOLOGY (2001) 8 (1) 65-74  
 Journal code: 9412590 ISSN: 1062-3329

116 ANSWER 6 OF 28 MEDLINE

TT Angiogenesis inhibitors in the treatment of lung cancer

SO LUNG CANCER (2001 Dec) 34 Suppl 3 S81-9. Ref: 62  
 Journal code: 8800805 ISSN: 0169-5002

116 ANSWER 7 OF 28 MEDLINE  
 TT Caveolin-1 null mice are viable but show evidence of hyperproliferative

and vascular abnormalities

SO JOURNAL OF BIOLOGICAL CHEMISTRY (2001 Oct 12) 276 (41) 38121-38  
 Journal code: 2985121R ISSN: 0021-9728

116 ANSWER 8 OF 28 MEDLINE

TT Vascular endothelial growth factor enhances glomerular capillary repair  
 and accelerates resolution of experimentally induced glomerulonephritis

SO AMERICAN JOURNAL OF PHYSIOLOGY (2001 Aug) 159 (2) 509-608  
 Journal code: 3RS: 0370502 ISSN: 0002-9440

116 ANSWER 9 OF 28 MEDLINE

TT Increased vascular endothelial growth factor 165 binding to kinase insert  
 containing receptor after infection of human endothelial cells by  
 recombinant adenovirus encoding the VEGF(165) gene

SO CIRCULATION (2001 Apr 10) 103 (14) 1887-92  
 Journal code: DAW: 0147763 ISSN: 1524-4539

116 ANSWER 10 OF 28 MEDLINE

TT Extracellular matrix protein 1 (ECM1) has angiogenic properties and is  
 expressed by breast tumor cells

SO EXPRESSION OF ECM1 (2001 Apr) 15 (6) 988-94  
 Journal code: EAS: 8804484 ISSN: 0892-6638

116 ANSWER 11 OF 28 MEDLINE

TT Release and complex formation of soluble VEGFR-1 from endothelial cells  
 and biological fluids

SO JOURNAL OF VITRO CELL DEVELOPMENT (2000 Apr) 80 (4) 443-54  
 Journal code: KZ4: 0376617 ISSN: 0023-6837

116 ANSWER 12 OF 28 MEDLINE

TT Vascular endothelial growth factor and interleukin-6 in paracrine  
 tumor-stromal cell interactions in multiple myeloma

SO BLOOD (2000 Apr 15) 95 (8) 2630-6  
 Journal code: A8G: 7603509 ISSN: 0006-4971

116 ANSWER 13 OF 28 MEDLINE

TT JNK1/2, a protein tyrosine phosphatase that regulates vascular endothelial  
 growth factor receptor-mediated signal transduction and biological

activity  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1999 Dec 31) 274 (53) 38183-8  
 Journal code: HVC: 2985121R ISSN: 0021-9728

116 ANSWER 14 OF 28 MEDLINE

TT Role of growth factors in mediating mesenchymal influence on the  
 cytodifferentiation of the Dunning prostatic adenocarcinoma

SO JOURNAL OF BIOLOGICAL CHEMISTRY (2000 Jan-Feb) 275 (1) 21-32  
 Journal code: TTB: 8409922 ISSN: 0280-5472

116 ANSWER 15 OF 28 MEDLINE

TT Vascular endothelial growth factor induces nephrogenesis and  
 angiogenesis

SO JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY (1999 Oct) 10 (4) 2125-  
 34  
 Journal code: AGH: 9013836 ISSN: 1046-6673

- I16. ANSWER 16 OF 28 MEDLINE  
 IT Inhibition of hepatic stellate cell contraction during activation in vitro by vascular endothelial growth factor in association with upregulation of F11 tyrosine kinase receptor family, F11-1  
 SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (1999 May 19) 258(3) 674-8  
 Journal code: NY 8.0372516 ISSN: 0006-291X
- I16. ANSWER 17 OF 28 MEDLINE  
 IT Vascular endothelial growth factor chemerin toxin is highly active against endothelial cells  
 SO CANCER RESEARCH ARCH (1999 Jan 1) 59(1) 183-8  
 Journal code: CNE.2984705R ISSN: 0008-5472
- I16. ANSWER 18 OF 28 MEDLINE  
 IT Role of vascular endothelial growth factor on erythropoietin-related endothelial cell proliferation  
 SO JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY (1998 Nov) 9(11) 1998-2004  
 Journal code: M01.9013836 ISSN: 1046-6673
- I16. ANSWER 19 OF 28 MEDLINE  
 IT Patterns of brain angiogenesis after vascular endothelial growth factor administration in vitro and in vivo  
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (1998 Jun 9) 95(12) 7086-91  
 Journal code: PY 3.7505876 ISSN: 0027-8424
- I16. ANSWER 20 OF 28 MEDLINE  
 IT Activation of Etk-1 KDR mediates angiogenesis but not hypoxia  
 SO CARDIOVASCULAR RESEARCH ARCH (1997 Nov) 36(2) 276-81  
 Journal code: C0R.0077427 ISSN: 0008-6363
- I16. ANSWER 21 OF 28 MEDLINE  
 IT Inhibition of tumor growth by targeting tumor endothelium using a soluble vascular endothelial growth factor receptor  
 SO CELL GROWTH AND DIFFERENTIATION (1998 Jan) 9(1) 49-58  
 Journal code: NYL.9100024 ISSN: 1044-9523
- I16. ANSWER 22 OF 28 MEDLINE  
 IT Up-regulation of Etk-1 vascular endothelial growth factor receptor 2 by its ligand in a cerebral slice culture system  
 SO CANCER RESEARCH ARCH (1997 Sep 1) 57(17) 3852-9  
 Journal code: CNE.2984705R ISSN: 0008-5472
- I16. ANSWER 23 OF 28 MEDLINE  
 IT Extracellular cleavage of the vascular endothelial growth factor 189-amino acid form by urokinase is required for its mitogenic effect  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 May 19) 272(6) 3390-6  
 Journal code: HNY.2985121R ISSN: 0021-9258
- I16. ANSWER 24 OF 28 MEDLINE  
 IT VEGF145, a secreted vascular endothelial growth factor isoform that binds to extracellular matrix  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1997 Mar 14) 272(6) 7151-8  
 Journal code: HNY.2985121R ISSN: 0021-9258
- I16. ANSWER 25 OF 28 MEDLINE  
 IT Heterodimers of placenta growth factor vascular endothelial growth factor endothelial activity, tumor cell expression, and high affinity binding to Etk-1 KDR  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1996 Feb 9) 271(6) 3154-62  
 Journal code: HNY.2985121R ISSN: 0021-9258
- I16. ANSWER 26 OF 28 MEDLINE  
 IT Vascular endothelial growth factor-toxin conjugate specifically inhibits KDR Etk-1-positive endothelial cell proliferation in vitro and angiogenesis in vivo  
 SO CANCER RESEARCH ARCH (1996 Mar 15) 56(6) 1324-30  
 Journal code: CNE.2984705R ISSN: 0008-5472
- I16. ANSWER 27 OF 28 MEDLINE  
 IT Mice old progenitor cell regulatory effects of vascular endothelial cell growth factor  
 SO INTERNATIONAL JOURNAL OF HEMATOLOGY (1995 Dec) 62(4) 203-15  
 Journal code: NYE.911627 ISSN: 0925-5710
- I16. ANSWER 28 OF 28 MEDLINE  
 IT Placenta growth factor: Potentiation of vascular endothelial growth factor bioactivity in vitro and in vivo, and high affinity binding to Etk-1 but not to Etk-1 KDR  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY (1994 Oct 14) 269(4) 25646-54  
 Journal code: HNY.2985121R ISSN: 0021-9258
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